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The London Medical Record.

VEALE ON THE FEVERS OF CYPRUS, MALTA, AND GIBRALTAR.*

THIS valuable report was published in the appendix to the Army Medical Department Report for 1879, only lately printed. This Blue-Book has a very limited circulation, even in the department whose work it records, and is practically a sealed book to the profession at large.

The most interesting feature in this report is the marked difference between the fevers of Cyprus and those of the two great Mediterranean garrisons. The cases of fever admitted into the medical division of the Royal Victoria Hospital from Cyprus were distinctly malarial, of the intermittent and remittent type; with the complications commonly seen in this class of fevers, greatly aggravated many of them, by what Dr. Veale justly calls the almost Siberian winter of 1878-79, in the midst of which the cases were admitted.

Dr. Veale gives an interesting general review of the cases treated, with an outline of the treatment adopted, and the details of some of the more severe cases, with temperature-charts. They bring out very clearly, as we have already said, the purely malarial nature of the fever, and serve as an admirable contrast to the more complicated fevers from Malta and Gibraltar—fevers, as Dr. Veale justly observes, but little known, except to medical officers of the Army and Navy—the etiology of which is yet extremely obscure.

We subjoin, in a greatly abridged form, Dr. Veale's general review of this remarkable form of fever, which, we believe, is new to most of our readers.

The disease appears to begin most frequently in spring or summer. Sometimes it begins like a mild quotidian ague, but more frequently the invasion is so insidious, that the patient cannot say when it began. The preliminary symptoms, in most essentials, closely resemble those of other febrile ailments—lassitude, drowsiness, slight headache, loss of appetite; subsequently nausea, even vomiting, the bowels being either constipated or the reverse. Regular rigors are wanting, but the patient is chilly and feverish, and his illness increases day by day. As the case progresses, headache is more severe, and the debility is so great that the patient can attend to nothing, remaining day and night hot, thirsty, ill, and desponding. In this state he continues for a week or two, and then fancies himself convalescent. In a day or so his symptoms return. Diarrhœa, sometimes passing into dysentery, now attacks him. This is often followed by chest-symptoms, cough, and flying pains about the chest, the expectoration tinged with blood; or he may be seized with severe pain in the back, or in one of his limbs, causing extreme suffering. With all this he emaciates rapidly, becomes anæmic, his hair falls out, his spleen, and sometimes his liver also, enlarges. It is at this stage that the patient is usually invalided and sent to England.

* A Report on the Fevers of Cyprus, Malta, and Gibraltar. By Brigade-Surgeon Veale, M.D., Assistant-Professor of Military Medicine, Army Medical School, Netley.

If the case be a severe one, all the above symptoms become intensified on coming into a cold climate. The headache becomes intense, the drowsiness passes into stupor and low muttering delirium, with extreme prostration. The lungs become congested, and often take on a low form of inflammation. There may be epistaxis, or hæmoptysis, or bloody diarrhœa, the blood being either dark or bright red. The pain in the limbs almost invariably develops into distressing rheumatism, with effusion into the joints, endocarditis, or other complications, and death may ensue at any time. When patients reach Netley, there may be and often is a delusive appearance of convalescence. Soon the rheumatism recurs, now affecting the joints, then the fibrous and aponeurotic structures; or the patient may be seized with bronchial catarrh, easily passing into capillary bronchitis, more easily into congestion and inflammation of the lung-tissue. The spleen is nearly always enlarged, and sooner or later it inflames. The cerebral symptoms are protean—despondency, irritability, readiness to shed tears, loss of virility, insomnia, anæsthesia, or hyperæsthesia. He may have dyspepsia, palpitation, pleurisy, epididymitis, or orchitis, together or in succession. He nearly always has fever, with evening exacerbations and morning remissions; and during the night or towards morning he perspires freely, without the smallest relief to his sufferings. After a time the symptoms seem to wear themselves out, and the patient enters on another period of convalescence of indefinite duration and degree. It may be progressive and complete; or in a few days, or even weeks, the pains may recur, and the patient may be as bad as ever.

Another strange feature of this disease is the occasional absence of any manifest local disorder, except, perhaps, enlargement of the spleen. The patient will say he is pretty well, has a good appetite, and that, if it were not for his night-sweats, tremulousness, and weakness, he would be as well as ever he was. Still he has a temperature oscillating from about 98 deg. in the morning to 102 or 103 deg. at night. Indeed, it is not uncommon to have these patients declare they are better when their temperature varies in this way than when its daily range is less; especially if the reduction have been induced by quinine. Dr. Veale gives careful consideration to the above symptoms in detail, which we regret we have not space even to abridge.

The exact duration of this disease can only be determined, as Dr. Veale justly says, when both patients and medical attendants shall have the courage and faith to observe without interfering with it. Still, he adds, it is a disease the duration of which with its sequelæ is to be counted in months rather than in days or weeks, and 'I have known it to last nearly two years'.

Instead of the many names given to this fever, all more or less 'question-begging', Dr. Veale suggests *febris complicata*, because the attributive adjunct 'complicate', states at once the most salient feature of the disease, but implies no theory as to its nature or cause.

It has hitherto been found impossible to arrest the disease by remedies. Quinine, in doses from 3 to 80 grains *per diem*, not only does no good, but in the large dose, positive harm. Colchicum, arsenic, turpentine, salicylic acid, the hyposulphites, and many other drugs, have been used as freely as seemed to be safe, but no reliance can be placed on them either to the fever, or even to diminish the night-sweats or the rheumatoid pains. The

solutions of carbolate of ammonia and of carbolic acid, in combination with iodide of potassium, have also been used for hypodermic injection, but without advantage. The hæmorrhagic tendency and bronchorrhœa have been checked by the use of tincture of perchloride of iron, or of ergot and ergotine. The hypodermic injection of morphia, and the liniments of opium, aconite, and belladonna, relieve the lumbar, sciatic, and articular pains.

The immediate mortality is certainly not large. Danger, however, is to be apprehended whenever the body-temperature is continuously high, and indirectly from such complications as hæmoptysis and catarrhal pneumonia.

Our space will not admit of our giving in detail Dr. Veale's interesting remarks on the etiology of this remarkable fever. He refers to the opinion strongly expressed by Professor Maclean that it is of hybrid origin—malarial, with a strong fœcal element. It is not our enteric fever; it has neither its clinical form, nor its mortality, nor its specific anatomical lesion. It is not purely malarial, as seems proved by its resistance to quinine, and by its duration after removal from a malarial locality. It is not relapsing fever, because it is neither epidemic nor contagious, and because it has a different mode of invasion as well as of evolution, and because no spirillæ have been found in the blood; and it is not dengue.

W. C. MACLEAN, C.B., M.D.

FENGER AND HOLLISTER ON THE TREATMENT OF CAVITIES IN LUNGS BY INCISION AND DRAINAGE.

DR. FENGER and Dr. Hollister of Chicago report, in the *American Journal of Medical Sciences* for October, a successful case of drainage of a gangrenous cavity in the lung, and refer to five previously recorded instances in which a similar treatment had been carried out. Professor Mosler of Greifswald was the first to expose and drain a pulmonary cavity; but, as the results in this case were not satisfactory, the surgical treatment of such condition was abandoned for a time. During the last three years, six other cases have been recorded, including that detailed in this paper, which case alone seems to have had a permanent and good result. The patient was a male, aged 34, who had a large fetid abscess in the middle lobe of the right lung, caused through suppuration around a large hydatid cyst of twelve years' standing. There was much fœtor of breath and expectoration, and an insufficient outlet for the discharge through the bronchi. There was subsequently diffuse purulent bronchitis in the remaining parts of the right lung, and the patient suffered from high fever and became emaciated and exhausted. After exploratory aspiration, an incision was made in the third intercostal space, in front and two inches to the right of the sternum. The cavity in the lung was then explored with the finger, and a counter-opening made in the fifth intercostal space in the anterior axillary line. The sac of the echinococcus-cyst was then removed through the first opening. A large India-rubber tube was then passed across the cavity and through both external openings, and the cavity was washed out with a solution of carbolic acid. The external openings were covered by antiseptic dressings. During the subsequent six weeks, there was decided improvement, with cessation of fœtor of the breath and ex-

pectoration. In the seventh week, after too early removal of the drainage-tube, there was a severe attack of diffuse purulent bronchitis of the whole of the right lung and the lower lobe of the left lung. The patient ultimately made a perfect recovery. The intrapulmonary character of this cavity was proved by the fact that soft lung-tissue could be felt at its lower, inner, and outer walls.

The authors of this paper hold that cavities, arising from acute pathological processes in lung-tissue (suppuration and gangrene), naturally present themselves as objects for surgical treatment when the anatomical conditions render such treatment possible. There is nothing absolutely fatal or necessarily progressive in the nature of these pathological processes, as is proved by a number of cases of this kind, in which spontaneous recovery has taken place by evacuation of the contents of the cavity through the bronchial tubes. In spite, however, of the possibility of spontaneous recovery, which seldom occurs in pulmonary gangrene, but is more common in cases of abscess, a number of cases remain in which the extent and increase of the cavity, and the gradual exhaustion of the patient, enable us to determine, long before death, that a fatal result is inevitable. In such cases, with the view of preventing further destruction of the lung-tissue, of arresting the exhaustion, and of guarding the patient from purulent bronchitis, broncho-pneumonia, and pleurisy, the surgeon, it is stated, is justified in any desire and attempt to evacuate the contents of the pulmonary cavity.

The operation is considered as indicated in any case where, the presence of a gangrenous or purulent cavity having been ascertained, it is found that, notwithstanding the existence of an outlet through the bronchi for a portion of the contents of this cavity, it steadily fills again without the patient gaining any relief from the partial evacuation. With regard to the seat of operation, any part of the chest, on either side, is accessible below the mammary and axillary regions. Pleural adhesions are to be expected in cases in which the superficial area of the purulent cavity is large, or, more frequently, in which several attacks of disease have occurred in that portion of the lung occupied by the cavity. When the cavity is extensive, and has reached the surface of the chest at different and distant places, the abscess should be opened at its lowest point, and at the place most favourable for the escape of its contents through the drainage-tube. The authors recommend that two openings be made, the first in the most superficial and, in other respects, most easily accessible place in the cavity; and the second, after digital exploration of the cavity, at the deepest portion which will admit of a counter-opening, and at a favourable and safe place for as nearly as possible complete evacuation of the purulent contents. In previous cases, but one opening had been made, and the authors think it probable that to the thorough drainage in their case permitted by the double opening, its permanently good result may be attributed. The cavity in this case was washed out at first by a weak solution of carbolic acid (2½ per cent.), and subsequently by a solution of thymol. It is regarded as an important point that the drainage-tube should not be removed too early, lest purulent bronchitis and broncho-pneumonia be set up through aspiration of pus from the still incompletely closed pulmonary cavity.

W. JOHNSON SMITH.

USKOFF ON THE OCCURRENCE OF SUPPURATION INDEPENDENT OF MICRO-ORGANISMS.

THE question, Can suppuration occur independent of micro-organisms, forms the title of a valuable paper in the October number of Virchow's *Archiv*. The author is Dr. Uskoff of Cronstadt. He shows how unsettled are opinions on the subject up to the present time. Referring to Dr. Ogston's researches, which will be found in the *British Medical Journal* of last March, he bears in mind the fact that bacteria could not be discovered by that observer in cold abscesses; this, however, only implies sterilisation of the pus, and, therefore, throws no light on the share which organisms might have taken in the formation of that fluid. With the assistance of Dr. Ponfick, Dr. Uskoff has made a series of experiments. Various mechanical and chemical irritants were injected into the subcutaneous cellular tissue of dogs. The seat of injection was previously shaved, washed, and punctured with a knife cleaned in a solution of carbolic acid. After from three to five days, a piece of skin and subcutaneous tissue was cut away, a short distance from the seat of injection. The fragment was then hardened, stained, and examined microscopically. The fluids employed were distilled water, boiled and cooled before use; milk, first boiled and then filtered, whilst still hot, through blotting-paper; olive-oil, also boiled before injection; turpentine; oil and turpentine; carbolic acid and turpentine; and, lastly, pus.

Injection with distilled water was followed in two cases by complete healing and absence of pathological appearances; in others, by small abscesses, sometimes invisible to the naked eye; their pus contained micrococci. The milk-injections gave similar results. After injection with oil, abscess, with pus containing organisms, formed in several cases.

The results of injections of turpentine, oil and turpentine, and carbolic acid and turpentine, were most interesting. Large abscesses frequently formed, or pus appeared freely diffused in the tissues; but, except in one very doubtful case, no micrococci could be discovered, though, in one instance, these organisms swarmed in the pus flowing from the wound produced by the removal of the fragment required for examination a day previously. Hence, concludes Dr. Uskoff, we may safely attribute the suppuration to the irritation of the injected turpentine. After injection with pus, when that fluid was taken from the dogs upon which turpentine had been employed for these experiments, suppuration followed in two out of three cases, but bacteria were found in the pus. This pus was at once injected under the skin of two dogs, with no result. Some more pus from one of the dogs, where turpentine had been employed, was exposed for four days in an open watch-glass till all odour of turpentine had disappeared and till organisms could be found. This pus was injected, but the wound healed at once.

Considering these results, including certain details not given above for want of space, Dr. Uskoff ends by noting that non-irritant fluids, when injected, produce no suppuration if employed in very small quantities. But violent inflammation, with formation of pus, follows their injection in greater quantity, or repeatedly, though in small quantity, in the same spot. Ordinary pus from abscesses, even when containing bacteria, is non-irritant when only a gramme

or two is introduced into a wound. Turpentine always causes violent suppurative inflammation, and, at least when that fluid is used pure, no organisms are to be found in the pus. Injection of a quantity of any fluid, however bland, tears up the tissues, even when gently introduced. The presence of bacteria in pus produced by injection of the non-irritants employed for these experiments, might be due, according to Dr. Uskoff's opinion, to the great difficulty in disinfecting such fluids before use. He still admits that micro-organisms are the cause of many cases of suppuration, but, as his experiments prove, they are by no means the invariable primary agents in that process; indeed, they may take no share in it at all, for the most violent suppuration may go on without them, and be traced, by experimental proof, to severe chemical irritation, especially when accompanied with mechanical damage to the tissues.

ALBAN DORAN.

MYERS ON FILARIA SANGUINIS HOMINIS.*

THE author commences by showing the rarity of filaria-infection, and of the diseases proved to depend on the presence of filariæ in the blood, at Formosa. This is the more remarkable, as Formosa is an island only separated by a channel, 180 miles wide, from the mainland, and in constant communication with Amoy, where, according to Dr. Patrick Manson, 1 in 10.8 of the inhabitants have filariæ in their blood. The only three cases of filariated individuals he has encountered were immigrants from the mainland. The immunity of Formosa is ascribed by the author to the absence of a fit intermediary host, the species of mosquito found on the island, which is larger and darker than those in which the embryo filaria sanguinis hominis is supported, proving an inhospitable host, digesting where it should have nurtured the filariæ. He fed with the blood of a filariated man, and watched, a number of mosquitos found at the place, but in no instance did the embryo filariæ undergo any development in the insect. He describes very carefully devised and extended experiments to filariate monkeys, but in no case was he successful.

He next proceeds to give the records of investigations to note the appearance and disappearance of the embryos of infected persons, with a view of corroborating or disproving Dr. P. Manson's discoveries as to the periodicity displayed by the parasites. For this purpose he was only able to get one person to submit to observation—a boatman, aged 28, who had suffered from slight swellings in the groin in youth, and was subject to attacks of 'ague', probably in reality lymphatic fever. Of the other two filariated patients, who would only allow occasional observations, one suffered from 'ague', the other from a callous ulcer of the leg. No enlarged glands could be detected, nor any other ailment which might be attributed to filarial infection.

A table is given showing the number of filariæ in a drop of the boatman's blood at different hours of the day and night, and the patient's temperature at the exact time of the observation. Part of this very interesting table is reproduced, the temperatures being omitted for want of space.

* *Observations on Filaria Sanguinis Hominis in South Formosa.* By W. WYKEHAM MYERS, M.B.

Number of Embryo Filariae in a Drop of Blood.

Days	4 A.M.	6 A.M.	8 A.M.	10 A.M.	12 Noon	4 P.M.	6 P.M.	8 P.M.	10 P.M.	12 Night.
5	41	32	6	0	0	0	0	20	42	34
6	45	41	2	0	0	0	0	20	40	38
7	36	59	0	0	0	0	0	46	42	28
8	40	29	0	0	0	0	0	7	38	260
9	81	28	0	0	1	0	4	10	...	...
10	22	14	0	0	0	0	1	8	36	27
11	38	12	0	0	0	0	0	6	22	35
12	33	15	0	0	0	0	0	3	40	120
13	41	10	0	0	0	0	0	12	29	62
14	21	9	0	0	0	0	0	5	80	170

It will be seen, as remarked by the author, the records amply bear out Dr. P. Manson's statements. The embryos appeared regularly between 6 and 8 p.m., generally a little after 6. By midnight they seemed to have attained their maximum, and from that hour decrease gradually set in. In the morning they would appear to retire between 6 and 8, which gives a period of 12 hours during which they disport themselves—just the time when their liberators, the mosquitos, are in active search for food. As regards the temperature of the patient, it is shown that at the hour when the embryos retrain into the blood the temperature rose slightly; as soon as they appeared in marked numbers (8 p.m.) it fell slightly; rose again at 10 p.m., and fell somewhat at midnight, when the embryos were most numerous. At 6 a.m. there was a slight tendency to rise, and from 8 a.m. onwards this is well marked. (In addition to the table with temperatures, daily charts are given for the whole period of the observations, which show the fluctuations in a very graphic manner). The author remarks 'on the whole it would appear from this case that the temperature bears no very marked relation to the number or activity of the embryos.' The observations are, as he observes, on a single case, whose temperature was as a rule higher than normal.

Dr. Myers next set himself the task 'to account, if possible, for the disappearance of the embryos at certain hours; discovering, if feasible, whether this was final as regards the swarm, or whether they lay dormant and adherent during certain periods in the lungs or other organs of the body.' When the blood is examined at night the filariæ are *always* exceedingly vigorous, and remain so for a long time, even for days. As time progresses their vigour diminishes, as shown by their movements becoming less active. From being coiled or twisted, gradually as they grow feeble, their bodies become extended or stretched out, movements of the whole body are replaced by feeble undulatory wavings limited to the extremities, and often of a spasmodic character, a lash-like process (part of the envelope from which the body has retracted) often appears at the extremities, the body shrivels and becomes very transparent, and, finally, many of the embryos disappear from sight. To elucidate the above problem as to the disappearance of the embryos at certain hours, the blood was drawn every quarter of an hour between 6.15 and 8.15 or 9.30 a.m. at the time of the disappearance of the embryos, and from 6.30 to 7.30 p.m., the time of their re-appearance, and careful observations were made as to the numbers and vitality of the hæmatozoa. The author shows that the greatest differences exist in the vitality of the embryos at these different hours of the day. He details observations as to the vigour of each in-

dividual embryo every quarter of an hour, and show, that after 6 a.m. they are found in a considerable proportion of cases very feeble, sometimes moribund, and occasionally quite dead. Of the evening ones, all were vigorous and healthy. It is obvious, according to him, that some decided change takes place in the condition of the embryos just prior to their retirement from the circulation, and he suspects that this is due to a temporary lethargy into which they fall until the time for their next nocturnal rambles. They would, if seeking shelter and repose in some large blood-channel or cavity, require all their vigour to maintain their position against the force of the blood-stream. Observations are next recorded as to the longevity of the embryos after withdrawal from the body, the slide being prepared in such a manner that desiccation was prevented. Each embryo was carefully observed every 12 or 24 hours, and its condition noted, comparative observations being made of the blood drawn morning and evening. The embryos were found to become more and more feeble, to die, and disappear, in the manner already described; but the vitality of the morning and evening embryos—as shown by the tenacity with which they clinged to life—was very different. Thus the embryos withdrawn in the morning, and treated in an exactly similar manner to those withdrawn in the evening, were all more or less weak when first extracted, and had all died or disappeared two or three hours after the termination of the *fourth* day; whereas those withdrawn in the evening had not all disappeared or died until an hour or two past the *seventh* day, besides being much more vigorous at the outset, and preserving their vivacity for a considerably longer period.

Dr. Myers, from these observations and other considerations, thinks it probable that each reappearance of the embryo filariæ is a fresh brood which perishes each day, as the relatively few mosquitos which could have access to infected men during the limited time available for their operations could not make any very appreciable diminution in the myriads of embryos which must be existent in the body; and, unless the parent worm breeds only at excessively long intervals, it would seem that some more rapid mode of disposing of the offspring than that offered by the mosquito would be required, in order to avoid the choking up of the vessels by the blood displacing embryos. Judging from analogy as to the generative power of the parent worm or worms (for it must be remembered there may be many), one is justified in assuming the produce to be frequent and enormous, more so than thousands of mosquitos, even if constantly at work, could manage to keep within bounds. If those generated had to wait their turn in the lottery of solution, it would necessitate an unusual or indefinitely limited arrest of development in the young, and of function in the parent. He, therefore, thinks it more probable that each nocturnal brood is got rid of by a diurnal solution in the blood, similar to that observed in the embryos kept under continuous observation on the microscopic slide. In reply to the obvious question, if the embryos die every twenty-four hours in the host, why do they live so much longer when liberated? the author believes that to a certain degree the act of withdrawal is a compliance with the natural requirements of the parasite, and that, in lieu of more or less sudden and general destruction there is the gradual decadence of strength and vigour exhibited by the embryos preserved on the slides. The paper concludes with some observations on the

effects of re-agents on the embryo filariæ, but the author remarks, very properly, that success in curing the disease will depend rather on our power of dislodging the parents.

[Dr. Myers' paper is a valuable contribution to a very interesting chapter of helminthology, and displays evidence of patient research and modest and critical reasoning. The periodicity of filarial migration corresponds exactly with that recorded by Dr. Patrick Manson, and with that observed in the case of filarial hæmato-chyluria recently shown by the reporter at the Pathological Society. The reporter, from his own observation, is able to confirm Dr. Myers' statements as to the relative activity and vigour of the embryos found in the blood in the morning and evening, and as to the disappearance by solution of the embryo filariæ kept under observation on the microscopic slide. The cause of the diurnal disappearance of the embryos is one of great difficulty, and Dr. Myers' hypothesis appears entitled to consideration in explaining the disappearance of some of the embryos. Dr. Cobbold, however, is of opinion that it is inconceivable that the whole nocturnal swarm can be the fresh daily offspring of the parents, even granting the presence of several parent worms.—*Rep.*]

STEPHEN MACKENZIE, M.D.

OLLIER ON RESECTION OF THE HIP.

THE following is an abstract of an original article by Professor Ollier on resection of the hip, with regard to its indications and its definite results (*Revue de Chir.*, Nos. 3, 5, and 7). Resection of the hip is regarded by the author as one of the great gains of modern surgery. The failures that attended the earliest attempts at this operation in France prove nothing against it. When practised on rational indications it is very often attended, in young subjects of suppurative coxalgia, with results that are favourable with regard to the preservation of life.

The dangers of this operation have been considerably diminished through the antiseptic method. But in estimating the gravity of the proceeding, one should not forget that in its application to cases of severe and progressive coxalgia, an affection likely to terminate speedily in death, it ought not to be resorted to with those cases which it has not been able to cure, but, on the other hand, should only be credited with the patients that it has saved. Statistics, which give merely the numbers of recoveries and deaths, can lead but to erroneous conclusions. The great mortality that has attended the performance of the operation in France is due to the fact that it has been applied only in desperate cases, whilst the success of operators in other countries is to be attributed mainly to earlier recourse to operation, and to frequent intervention in cases where cure might have been probably effected by drainage and rest. It is this difference in the appreciation of indications, according to localities and epochs, that renders difficult any comparison of diverse series of observations. Considered with regard to the ulterior growth of the resected limb and the orthopædic and functional result, the value of resection of the hip has hitherto, notwithstanding the great number of observations recorded in statistical tables, not been definitely appreciated. Much confusion has prevailed on this point, through inexact measurement and too hasty observation. The arrest of

growth which follows resection of the hip bears relation to the importance of the conjunctive cartilages sacrificed during the operation, and to the change in the nutrition of the limb, due to the primary lesion and to the disturbance of function which this has caused.

The arrest of growth, from this latter point of view, cannot be ascribed to the resection; since this operation has for its aim and result the removal of the cause which impairs the general nutrition of the limb. The femur, like all the long bones of limbs, does not grow equally at its two extremities. The growth at its lower extremity about doubles its growth at the superior extremity, in other words, whilst it is extending downwards by half an inch, it extends upwards by only a quarter of an inch. This relation of one to two between the two conjunctive cartilages of the femur is not constant during the whole period of growth. It represents the total growth from birth to adult age; but, at the beginning of life, the upper extremity of the femur grows faster than the lower, and until the fourth or fifth year, the growth of the bone takes place equally at its two extremities. At the end of the fifth year the rate of growth at the superior extremity is reduced in relation to that at the inferior extremity. From the age of four years to the completion of growth, the relation does not exceed one to three; that is to say, the femur gains 1 centimètre above, whilst it gains 3 centimètres below.

Removal of the cartilage of conjunction from the upper extremity of the femur of a subject under the age of four years, renders this bone liable to an arrest of growth (about 9 centimètres) in consequence of the abstraction of the physiological elements of its increase in length. To this cause of arrest of growth must be added the general atrophy of the bones of the limb, and the deficiency which will result through an extensive diaphysal resection, when care has not been taken to preserve the periosteal sheath. The conjunctive cartilage of the head of the femur is the only cartilage of the upper extremity of the femur which serves for the increase in length of this bone, considered either from a statical or from a functional point of view, in walking and standing.

The 'serviceable length' of the femur is measured by the distance from the inferior bicondylar plane to the most elevated point of the head. The continuation of the increase in length through the subtrochanteric cartilage after decapitation of the femur, does not compensate for the arrest of growth at the neck of the bone. The subtrochanteric cartilage assists in the growth of the femoral diaphysis or, at least, in that of its external part; and thus, notwithstanding removal of the head and neck of this bone, the femur after resection of its upper extremity will seem to be as long as the sound bone of the opposite side, if it be measured from the summit of the trochanter to the inferior border of the outer condyle. But this length of the external border does not represent the 'serviceable length' of the bone. Notwithstanding the almost equal length of two femora measured along their external borders, the limb on the side of the operation may really be shorter by several inches, in consequence of elevation of the femur on the pelvis.

After resection of the hip an articulation, movable and at the same time strong, may be formed between the thigh and the pelvis. But the type of articulation is completely changed. Instead of a head rolling in a cavity, there is the upper extremity of the femur united to the pelvis by fibrous bands,

firm, but still more or less supple, so that in locomotion there is always a tendency in the femur to ascend, and in the pelvis to descend. The pelvis is thus suspended, as it were, on the femur.

The subperiosteal method alone enables us to take advantage of all the elements which can contribute to produce an articulation, which is, at the same time, both movable and strong. Through the abundance of the periarticular fibrous formations, the chances of ankylosis are, all other things being equal, much greater after resection by the subperiosteal method than after resection performed by the old method.

The arrest of growth of the femur after resection of the hip may be compensated by inclination of the pelvis. It is this compensation that may lead one to regard the lower limbs as almost of equal length, although the resected limb may really be 7 or 8 centimetres shorter. The possibility of obtaining, by suitable consecutive treatment, this sinking of the pelvis on the side of the operation, neutralises in great part the inconveniences of resection from the point of view of ulterior growth of the limb.

Notwithstanding the good orthopædic and functional results that may be attained by resection of the hip, particularly if it be performed before the appearance of irreparable disorders in the bone and in the peripheral tissues, this operation should not be applied except in cases with very clear indications, and until after all the resources of rational expectation have been tried. The cases in which the surgeon should at once have recourse to operation are very rare, and the chances of the success of preliminary operations (repeated puncture, incisions, arthrotomy) are much increased by the practice of antiseptic dressings. But it is necessary to have recourse to resection in cases where the bad symptoms increase, notwithstanding antiseptic incisions and drainage.

It is difficult to be clear *à priori* of the osseous or articular origin of hip-joint disease; but although in the infant the disease is generally osteopathic in the first place, and for this reason apparently favourable for resection, cure may yet be attained in the majority of instances of suppurating infantile coxalgia through a methodical expectant treatment, aided by the resources of hygiene. But resection, suppressing at once tubercular deposits of osseous origin, is, in cases which have no tendency to recovery, the surest means of removing the source of suppuration, and of preventing general tubercular infection.

The results of resection will be the better from an orthopædic and functional point of view, and will resemble the more those obtained by experiments on animals, the earlier the period at which the operation is performed.

Although a movable articulation may be always attained by a well-conceived operation and well-directed after-treatment, the surgeon ought not always to seek for such result. Under the conditions in which resection for articular suppuration is most frequently performed, it is better to have an osseous ankylosis in good position when the patient is compelled to work for his living. With osseous ankylosis of the limb in good position, we have a limb that is, speaking generally, more useful than a movable limb, and one less liable to relapse.

Resection performed in cases of injury or of acute suppurative arthritis will, without doubt, afford all that a well-arranged operative method may permit one to expect; but when the bone is much diseased,

and surrounded by disorganised soft parts, the surgeon is more likely to attain, through his operation, an imperfect articulation, and one liable to inflame afresh under the influence of repeated pressure, and of movements of the limb. After resection, or after hip-joint disease, with prolonged suppuration, osseous or strong fibrous ankylosis is the most sure means of attaining radical cure, or at least a positive cessation of bad symptoms.

W. JOHNSON SMITH.

WIGHT ON THE DIAGNOSIS OF FRACTURE OF THE NECK OF THE FEMUR.

DR. T. S. WIGHT of New York, in the October number of the *Proceedings of the Med. Soc. of the County of Kings*, tabulates the records of twenty-one cases of fracture of the neck of the femur, with the view of aiding in the settlement of the following question: Are there any signs by which we can be reasonably sure that there is a fracture of the neck of the femur, on the supposition that crepitus is absent, and that it is not good practice to try to find crepitus?

In all of the twenty-one recorded cases, there was more or less obliteration of the abdomino-femoral or inguinal fold on the side of the injury. This, Dr. Wight states, was probably due to two causes: effusion in front of the injured femoral neck; contraction of the soft parts in front of the bone. About half of the patients were examined standing up; and in these cases, when the foot of the injured side was brought down to the floor, the gluteo-femoral fold on that side was seen to be lower than the gluteo-femoral fold on the uninjured side. There was external rotation of the injured limb in all these cases. In all the cases of impaction of the base of the femoral neck, the upper end of the femoral shaft was materially enlarged. There were, Dr. Wight thinks, eight such cases. In all of the cases of impaction of the top of the femoral neck into the femoral head, the upper end of the femoral shaft was not enlarged. Dr. Wight states that there were probably five such cases. The other eight cases, it is thought, did not belong to either of the above classes. In all the cases, there was more or less prominence of the outside of the hip, but the gluteal region was somewhat flattened, and generally there was a fusiform enlargement of the upper part of the thigh. In fourteen of the twenty-one cases, there were more or less asymmetry of the lower limbs. This was determined by measuring in every case from the top of the great trochanter, and agrees with the general fact that this asymmetry exists in about two out of every three persons.

The average shortening in fracture of the neck of the femur, according to Dr. Wight's tables, is about 62-100ths of an inch, as shown by the inside measurement (from the superior anterior spine of the ilium to the extremity of the internal malleolus); about 55-100ths of an inch, as shown by the outside measurement (from the superior anterior iliac spine to the lip of the outer malleolus); and, as shown by both measurements, is about half an inch, 55-100th.

From subsequent measurements that Dr. Wight made in nine of the twenty-one recorded cases, he found that the average shortening of the lower limb during eight or ten weeks of treatment was less than one-eighth of an inch. From a theoretical point of view, Dr. Wight points out, there need be no surprise that the lower limb does not materially shorten during treatment of fracture of the femoral

neck, if two plain anatomical facts be remembered and appreciated. Firstly, there are strong fibrous structures going from the upper end of the femoral shaft obliquely downward and inward to the obturator membrane, and the arch of bone below and at the sides of the obturator foramen. These structures act as strong ligaments, to prevent the femoral shaft from ascending after fracture of the neck of the bone. Secondly, femoral necks that are liable to be broken are probably mostly, more or less, nearly at a right angle to the shaft of the bone. Hence, after fracture of the neck of the femur, and during the treatment, the usual absorption of broken and contused bone will be nearly in a direction at right angles to the shaft, so that absorption of the neck would not cause material shortening of the injured bone.

In answer to any objection that the above conclusions on consecutive shortening after fracture of the neck of the femur are not in accord with the accepted teaching of surgeons, Dr. Wight states that this teaching is, in the main, founded on the opinions of surgeons, and that careful and systematic attempts have not been made to make comparative measurements of the length of the lower limb at the time of fracture, and subsequently. Moreover, the upward tilting of the pelvis on the injured side will make a difference of nearly half an inch in the measurements of the lower limbs in favour of the injured limb, and the consecutive downward tilting will make an equal difference in favour of the limb in which the femoral neck has not been broken.

In a suspected case of fracture of the neck of the femur, Dr. Wight examines all the witnesses of fracture except crepitus, and, if these witnesses agree, he pronounces a verdict in favour of this injury. He does not try to make out crepitus, since, as he holds, unwarrantable force will be required in order to obtain this sign in many cases of fracture of the neck of the femur. More than this, an impacted fracture of the neck may be broken up by severe manipulation, and a patient who might have had an useful limb may be completely disabled for life.

W. JOHNSON SMITH.

FELTZ AND RITTER, ASTASCHEWSKY, AND DEMJAKOW, ON THE PATHOLOGY OF URÆMIA.

FELTZ and Ritter (Paris, 1881) have come to the conclusion, on the basis of a large number of experiments, that the phenomena of uræmia are due to the accumulation in the blood of the inorganic constituents of the urine, especially the potash salts. They found that, in animals whose renal arteries were tied, the longer they lived the more urea, creatine, and ammonia were found in the blood; but that the introduction of these salts into the blood of animals whose renal arteries had been ligatured, did not hasten the uræmic symptoms, while the injection of fresh urine did. This was not from simple increase of blood-pressure, as similar quantities of pure or acidulated water gave negative results. They reckoned the quantities of urea, urates, hippurates, creatine, creatinine, leucine, tyrosine, taurine, anthine, etc., which would be formed during three days (the time in which death usually followed after ligature), and found that injection of this quantity of each produced no effect. The same negative results followed the injection of the ammonia derivate, of the extractives, urea, and urinary ferment,

also chloride, sulphate, and phosphate of ammonia. On the other hand, urine, from which the organic substances and earthy salts were removed, was rapidly fatal, and was so in proportion to the amount of potash salts contained in it. Also, they found the same results from the injection of fluids containing potash; for example, they found that a dog, weighing 15 kilogrammes, was killed by a dose of chloride of potassium equal to two decigrammes per kilogramme of body weight; others were killed by 10 to 15 centigrammes. The minimum dose of phosphate of potash was rather larger, 25 centigrammes per kilogramme. With chemically pure solutions, the toxic action was still more marked and quicker. The soda salts were innocuous in doses of 1 gramme per kilogramme. The earthy salts were so equally. Finally, an increase of the potash salts in the blood was found in the animals dying of uræmia from ligature of the renal vessels.

Astaschewsky (*Petersburger Med. Woch.*, No. 27, 1881) had independently come to the same conclusion as the above. He found no effect from urea or creatinin, whilst the injection of the mineral salts of the urine, in amount equal to the three days' equivalent, caused uræmia. When the potash salts were removed, no decided effect followed.

Demjakow (*Petersburger Med. Woch.*, No. 28) observed auræmic patient with a strong ammoniacal odour. He injected urea and ferment without distinct results, until he used the three days' equivalent. Pure urea hastened the uræmic attacks by twenty-four hours. Urea and ferment produced attacks in twenty to forty minutes; simple ferment gave no result. Ammonia was never found in the blood or expired during the attack, but often, in the former, after death. He frequently obtained no conclusive results from his experiments.

ROBERT SAUNDBY, M.D.

SEGUIN ON HYOSCYAMIA AS A DEPRESSOR-MOTOR.

DR. SEGUIN has recently published in his *Archives* some valuable observations on the use of hyoscyamia in paralysis agitans and choreiform affections, and records some very striking results. The case of paralysis agitans is given at full length, and is accompanied by tracings of the movements of the middle tendon of the extensor communis digitorum, and of the tendon of the extensor carpi radialis. The patient was 42 years of age, and had suffered from the shaking for about four years. The tremor affected the left leg (slightly) and both upper extremities, the head and right leg being perfectly still. The movement consisted of alternate flexion and extension, made with great rapidity and with absolute rhythm. The normal use of the hand for eating, dressing, etc., was much hampered, not only by the tremor, but by a certain slowness and stiffness in willed muscular movements. The patient had been under the care of several eminent specialists, and had received, without benefit, a great deal of treatment, including sedatives, counter-irritants to the spine, and hypodermic injections of strychnia. Dr. Seguin prescribed: Hyoscyamiæ, gr. i (Merck's crystallised); Glycerini; Aquæ destillatæ, aa ℥ i; Acid. carbol. pur., gtt. ss. Mix, filter with care, and label—'Hyoscyamia solution for hypodermic use, ℥ i = $\frac{1}{200}$ grain.

The patient was given in the arm an injection of four minims (gr. $\frac{1}{30}$); and half an hour later all tremor had ceased, the mouth was parched, and the pupils were

dilated. An hour after the injection the patient was greatly distressed by dimness of vision and by extreme dryness of the mouth, causing almost complete aphonia; there was also slight delirium. Four hours after the injection, these symptoms had in a great measure passed away, but the hands were still absolutely quiet, and the tremor only very gradually re-appeared during the ensuing two hours. On subsequent days three or four minims were injected, and with invariably the same results. In a week or two a certain degree of tolerance was established, and three and a half or four minims did not produce much distress, but still suspended the movements for from two to four hours. Whilst the daily injection of hyoscyamia gave great relief, it produced no unpleasant symptoms of any importance. The digestive organs remained in good condition, the accommodation was not completely paralysed, and no irritation was produced at the site of puncture. After six weeks of this treatment, pills containing one-thirtieth of a grain = .002 grmms of hyoscyamia were substituted for the injections, with equally good effect, it being found that two pills a day gave the patient several hours of absolute freedom from tremor without producing toxic symptoms. A month later, the patient became more sensitive to the drug, and the doses were reduced to one-thirtieth of a grain in the morning, and one-sixtieth in the afternoon. The paresis of accommodation varied somewhat from time to time, but was readily corrected by weak convex glasses. The patient was discharged after four months of treatment, greatly benefited. In other cases of paralysis agitans equally good results were obtained, one-fiftieth of a grain in the forenoon, and again at bed-time, being sufficient to almost arrest the trembling for from one to three hours. In none of these cases, however, was the improvement permanent; for after a few weeks, on omitting the drug, it was observed that the tremor was as before.

In two cases of chronic chorea, hyoscyamia proved most beneficial. The first was a case of coördinated rhythmical hysterical spasm (hammering or pounding chorea), occurring in a young woman. When seen, she was sitting up in bed, a pillow lay upon her knees, and she was pounding it with her two closed fists with a regular up-and-down stroke. The blows were quite hard, given with perfect rhythm, at the rate of about a hundred strokes a minute. This performance was kept up incessantly until sleep supervened, when it ceased. It continued from fourteen to eighteen hours a day, without the production of any apparent fatigue. The treatment already indicated was adopted with striking benefit, but without effecting a cure, as the patient died suddenly from uræmic convulsions and coma.

The experience of observers with reference to the physiological effects and therapeutic uses of hyoscyamia may be summed up as follows.

1. It is a mydriatic.
2. In small doses, it reduces the cardiac pulsations, and increases arterial tension. It may cause a fall of temperature, and may produce a rash. It often gives rise to hallucinations and delirium.
3. In large doses, it increases the pulse rate, produces partial paralysis, and induces sleep.
4. It is indicated in mania, restlessness, delusions of persecution, dementia with agitation and destructiveness, epileptic mania, insomnia, status epilepticus, chorea, paralysis agitans, hysterical spasms, tremor, neuralgia, etc.
5. In mania and allied states, it induces sleep with great certainty;
6. In the status epilepticus, it shortens the attack

materially. 7. It is a diuretic. 8. Its curative power is not great, and in most spasmodic diseases it is only a palliative.

Dr. Seguin suggests that, in cases of very acute chorea, where death is threatened by incessant motion, hyoscyamia may prove of benefit by securing muscular relaxation with certainty, thus allowing the patient to rest, and giving time for other remedies to act.

WILLIAM MURRELL, M.D.

SAUNDBY ON THE DIGESTIVE ACTION OF CARICA PAPAYA.

THE author (*Birmingham Philosophical Society Proceedings*, Vol. ii, Part 2) refers to the fact that plants may develop ferments capable of digesting albuminous substances for their own nutrition. But the juices of certain plants may contain a proteolytic ferment unconnected with the nutrition of the plants themselves.

The milky juice of the papaw fruit is used by Indian cooks to render tough meat tender; and, in the Mascarene Islands, newly killed meat is wrapped in the leaves of the tree. In Java, Guiana, and other places, the same use is made of the papaw tree, which is widely scattered throughout both hemispheres. The fruit is like a musk-melon in appearance and structure, with a strong and pungent flavour. The milk has a strongly acid reaction, and gelatinises, with three times its volume of water. It is astringent, and has sp. gr. of 1023 at 26 deg. Cent. (78.8 Fahr.).

G. C. Roy, in 1874, published an account of the action of the papaw juice; and in 1879, Wurtz and Bouchut gave the result of some observations, which were followed by those of Peckoldt. The three last-named observers got by precipitation a white amorphous substance, which has been termed papaine or papayotine. This is insoluble in ether, chloroform, and alcohol, but completely dissolved by water and glycerine. Nitric acid precipitates it, but, on adding excess, it is redissolved. Dr. Saundby procured a plant, but it was sickly and died. A glycerine extract of the leaves and stalks was unsatisfactory in its results. An extract of the leaves was then got, but it also failed in its action. At last he obtained some dried juice, and began a series of investigations with a solution of egg-albumen, 1 in 10, filtered and boiled in a water-bath. Five grains of the dried juice was capable of digesting two fluid drachms of the solution, or about two and a half times its weight of moist egg-albumen. The action was feeble in acid and alkaline solutions. At the end of digestion, the solutions were neutral. Compared with an equal quantity of pepsine (B.P.), it greatly exceeded it in activity. In the experiments, the digestive mixtures were contained in test-tubes, kept in a water-bath, at 100 deg. Fahr., for twenty-four hours. At the conclusion, the contents were filtered, neutralised, tested by boiling and nitric acid for undigested albumen, and by Fehling's solution for peptone. The chemical reactions of the juice show that the part soluble in water has all the characters of an albuminoid. The actual ferment has not been isolated, but, like pepsine, trypsin, etc., is only recognisable by its effects. It therefore belongs to the class of unorganised ferments.

G. A. GIBSON, M.D.

CHINESE OPIUM-SMOKING.

THE New York correspondent of the *Chicago Medical Review* (October 1881) describes a night visit to the opium dens of Chinatown, made at the invitation of Dr. Kane, the Medical Superintendent of the De Quincey Home for opium *habituals*. Before starting on their expedition, they inspected a complete 'out-fit' for opium-smoking, including an original Chinese lounge. They were also shown a remarkable collection of tracts against the habit, in both the Chinese and English languages. In one of these, the different stages of degradation, through which the opium smoker is supposed to sink to an untimely grave, were graphically depicted. They then proceeded to the district where the Chinese mostly congregate. They first entered a den patronised by American opium-smokers, where they found seven men and one woman. It is an erroneous idea to suppose that opium is smoked in any way like tobacco. It is not uncommon to see maudlin sentimentalists stand in front of a Chinese laundry, where an inmate is smoking one of the long reed-stemmed tobacco-pipes, and point out the unconscious celestial as a man in the grasp of the opium-fiend. Opium-smokers are very hospitable; in fact, one of the characteristic effects of the habit is the feeling of good fellowship it creates. The reporter was induced to smoke five pipes before leaving the place. He says:—'I had, from my reading, expected to be prostrated; to repeat my first sea-voyage experience; but none of that. On the contrary, with the exception of a scarcely noticeable fullness of the head, referable, I think, rather to the confined atmosphere and the Chinese pastilles burnt as perfumery, I noticed nothing unpleasant. Nor did I, in my visit to either the American or Chinese dens, see a single person who exhibited the slightest indication that the habit had had an injurious effect; they were all, Caucasian and Mongolian, male and female, averagely healthy, and some of them were the picture of health. There evidently has been a good deal of sentimental gush about the subject. I found the opium-smoker quiet, inoffensive, and inclined to an inobtrusive sociability. My companion told me that, while he had treated hundreds of opium *habituals* who had used morphia hypodermically or by mouth, he had had occasion to treat but a single opium-smoker. How many cases of delirium tremens, of alcoholic insanity, of renal and hepatic disease, would have occurred among five hundred devotees of rum in the same time? There is, morally and medically, as great a difference between him who uses morphia hypodermically, or opium by mouth, and him who smokes opium, as there is between the man who drinks raw spirits and absinthe by himself, and him who takes his wine or beer in company. It is suggested that opium-smoking might be used with advantage in thoracic affections, particularly in irritable phthisis and bronchitis.'

[For observations on opium-smoking as a therapeutic agent, see papers by Dr. Reginald Thompson on 'The Therapeutic Value of Drug-Smoking'; also a paper on opium-smoking read before the Medical Society by Dr. Thudichum.—*Rep.*]

WILLIAM MURRELL, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. DEB, UMRITO LALL. — *Amaranthus Spinosa*. (*Indian Med. Gaz.*, Nov. 1.)
2. PAVIES, C. — Chlorated Tincture of Iodine. (*Lo Spallanzani*.)
3. RUYTON. — Indian Hemp in Hydrophobia. (*Brit. Med. Jour.*, Nov. 1881, p. 811.)
4. COOK, E. A. — Administration of Nitrohydrochloric and Nitrous Acids. (*Practitioner*, Nov. 1881, p. 328.)
5. MURRELL, W. — Bethesda Water in Diabetes Mellitus. (*Brit. Med. Jour.*, Nov. 1881, p. 849.)
6. WALKER. — Advanced Pharmacy. (*Lancet*, Dec. 1881, p. 994.)
7. WHITE, W. H. — Glycerine of Pepsine as a Solvent of Diphtheritic Membranes. (*Lancet*, Oct. 1881, p. 700.)
8. DOWN. — Treatment of Sunstroke by Bromide of Potassium. (*Brit. Med. Jour.*, Nov. 1881, p. 777.)
9. PARK, R. — Viscum Album or Mistletoe. (*Practitioner*, Nov. 1881, p. 346.)
10. PARK, R. — Sandal Wood Oil in Gonorrhœa. (*Practitioner*, Dec. 1881, p. 440.)
11. THIN, G. — Boracic Acid in Skin Affections. (*Practitioner*, Dec. 1881.)
12. MASSINI. — Hydrobromic Acid. (*Correspond. für Schweizer Ärzte*, Sept. 1.)
13. GIBSON, G. A. — Action of Duboisia. (*Journ. of Anat. and Phys.*, vol. xiv.)
14. PAUL, CONSTANTINE. — On Resorcine. (*Bull. et Mem. de la Soc. de Thérap.*, July 30, 1881.)
15. CALLAIS, HIPPOCRATE. — On Resorcine and its Therapeutic Uses. (*Gaz. Hebd. de Méd. et de Chir.*, Sept. 16, 1881.)
16. HAMMOND, W. A. — On the Therapeutical Uses of Nitro-glycerine. (*Trans. New York Neur. Soc.*, Oct. 4, 1881.)

1. *Deb on Amaranthus Spinosa*. — Umrilo Lall Deb, assistant-surgeon, Howrah General Hospital, brings to notice (*Indian Med. Gaz.*, Nov. 1) the medicinal virtues of the root of *amaranthus spinosa* in the treatment of gonorrhœa and eczema. It is a common shrub, grows all over Bengal and the North-Western Provinces. In the latter place it is somewhat scarce in the hot weather, as it dries up by exposure to the powerful rays of the sun, but even then it can be found out there in shady places. In Bengal it is constantly found everywhere. Cows and rabbits are very fond of the leaves. In milking cows, some people believe that it increases the secretion of milk. In the human constitution, internally, the fresh root acts as a diuretic, slightly laxative and refrigerant. He has used the fresh root in numerous cases of gonorrhœa, with remarkable success. It may be called a specific for gonorrhœa. He generally directs his patients to chew it with or without a betel leaf, five or six times a day. For this purpose the root of young plants is admirably suited; tender parts of the root of grown up plants may be also used. The root is succulent and tasteless. It may be taken as much as a rupee weight in a day, without causing the least inconvenience. Generally five or six roots are sufficient for a case for one day. This is repeated every day for one week to complete the cure of gonorrhœa. It takes away the muco-purulent discharge and all the concomitant symptoms, such as heat, itching, general irritation about the penis, scalding in passing urine, pain about the anus, and painful erections at night. The use of hot spices and chillies and stimu-

lants are forbidden. To assist the action of the remedy, milk diluted with plenty of water may be taken, but it is not necessary. Injections into the urethra are not at all required. Milk-diet and rest are chiefly enjoined. It is superior to the remedies ordinarily used, such as copaiba, cubebs, gurjun oil, and sandal-wood oil. The Bengalee name of the plant is Kanta nuteeya. It is so cheap that it costs little or nothing, and can be got for the gathering. He earnestly recommends its use to all professional men. Externally he has used the root ground down to pulp with an equal portion of raw turmeric in a little water in eczema, and finds it very efficacious.

2. *Pavesi on Chloralated Tincture of Iodine.*—C. Pavesi (*Lo Spallanzani*), to further increase the therapeutical powers of the tincture of iodine, adds to it chloral, which dissolves in it without decomposition. The resulting preparation has the property of being miscible with water without precipitating. The proportions of its ingredients are: Iodine (very pure), 20 parts; chloral-hydrate, 30 parts; spirits of wine, strength 36, 140 parts. The solution should be filtered, and kept in an emery polished bottle. The liquid is of pure golden hue, soluble in water, and has an odour and taste which indicate its ingredients. The chloralated tincture of iodine, on account of its marked coagulating powers over albumen, is an excellent hæmostatic, and very useful in the treatment of large wounds as an antiseptic and hypnotic.

3. *Ruxton on Indian Hemp in Hydrophobia.*—Mr. John Ruxton, in the *Brit. Med. Jour.*, Nov. 1881, p. 811, reports a case of hydrophobia which recovered under the use of the wet pack and Indian hemp. The patient was a lad of six years, and took five-minim doses of the tincture, so as to produce deep and long continued sleep, from which he awoke able to swallow fluids, and made a rapid recovery. [Mr. Ruxton is evidently unaware that the Indian hemp has been a long known and highly valued drug in the treatment of hydrophobia. In the *Lancet*, July 1840, p. 540, Dr. O'Shaughnessy reported a case in which the power of the drug to alleviate many of the symptoms of hydrophobia was well illustrated. Professor Polli, in the *Med. Press and Circular*, Dec. 15, 1869, also gave details of a case in which hemp gave vast relief, although it did not cure the patient, a man aged thirty-eight years. Vide *Med. Digest*, 527.—*Rep.*]

4. *Cook on the Administration of Nitro-Hydrochloric and Nitrous Acids.*—In the *Practitioner*, November 1881, p. 328, Dr. E. A. Cook, speaking of the great value of these acids in many cases, explains the cause of the frequent disappointment arising from their use, by the fact, that their activity is dependent upon their freshness, and that if kept long, in a state of admixture, their active principle is destroyed. Dr. Cook finds that nitrite of soda, when mixed with dilute hydrochloric acid, evolves the free oxide of nitrogen, and that the chlorate of potash evolves the free oxides of chlorine. He therefore gives the following *R.* Sodæ nitriti, potassæ chloratis, aa ʒss, aquæ ʒiv; misce. *R.* Acidi hydrochlorici dil., aquæ, aa ʒij. A teaspoonful of each mixture to be added to a wineglassful of water, and taken after meals. If no chlorine be desired, omit the chlorate of potash.

5. *Murrell on Bethesda Water in Diabetes Mellitus.*—Dr. William Murrell, in the *Brit. Med. Jour.*, Nov. 26, 1881, p. 849, details his experience in a case of diabetes treated with Bethesda water, in which the good effects were most marked, and such

as to suggest a more extended trial of the water in this disease.

6. *Walker on Advanced Pharmacy.*—In an interesting paper (*Lancet*, Dec. 1881, p. 994), Mr. B. Walker advocates small repeated doses of the alkaloids, veratrine, aconitine, hyoscyamine, strychnine, digitaline, ergotine, and others, in lieu of the larger doses of the tinctures, etc., now usually given. Speaking of hyoscyamine, Mr. Walker is enthusiastic in his praises of the drug in cramp and pains of hollow viscera (stomach, bowels, or bladder) finding the relief afforded to the spasm of retention, dysentery, and hernia, most satisfactory.

7. *White on Glycerine of Pepsine as a solvent of Diphtheritic Membranes.*—Dr. W. Hale White, in the *Lancet*, Oct. 1881, p. 700, speaks very highly of this preparation, which proved most efficacious in a child two and a half years old. Dr. White has found, contrary to many observers, that lactic acid is useless. [This can only have occurred from some peculiar combination of circumstances in Dr. White's experience, as numerous trials have convinced the reporter that hitherto the value of lactic acid stands unrivalled.—*Rep.*]

8. *Down on Treatment of Sunstroke by Bromide of Potassium.*—Dr. Langdon Down, in the *Brit. Med. Jour.*, Nov. 1881, p. 777, speaks favourably of the action of bromide of potassium in sunstroke. [Dr. C. Handfield Jones, in a most instructive lecture upon sunstroke, published in the *Med. Times and Gaz.*, March 1878, p. 271, explains why the bromides are so valuable in some cases of sunstroke.—*Rep.*]

9. *Park on Viscum Album or Mistletoe.*—Dr. R. Park, in the *Practitioner*, Nov. 1881, p. 346, speaks of a tincture of this plant as a valuable substitute for digitalis. The late Dr. Wigglesworth, of the Forest of Dean, used it largely among the miners working in Messrs. Crawshaw's pits, and apparently with great success. [Dr. Murrell describes, in the *LONDON MEDICAL RECORD*, 1881, p. 266, the value attached to this plant by several American physicians; and in the *RECORD*, 1878, p. 355, Dr. Hobbs reports the ebolic action of the viscum album to be more energetic than that of ergot.—*Rep.*]

10. *Park on Sandal Wood Oil in Gonorrhœa.*—Dr. R. Park (*Practitioner*, Dec. 1881, p. 440) places the claims of sandal wood oil in the treatment of gonorrhœa upon an assured basis. It must be continued for at least a fortnight after all running has ceased, and be given in scruple doses thrice a day. In Dr. Park's hands it has rarely failed, but it does so occasionally.

11. *Thin on Boracic Acid in Certain Skin-Affections.*—Dr. George Thin (*Practitioner*, Dec. 1881, p. 401) describes the value he has found from the use of boracic acid, dissolved in glycerine and incorporated with white wax and almond oil, in many skin-affections. [In the *LONDON MEDICAL RECORD*, Aug. 1878, may be seen the value that Neumann attaches to this drug in many cutaneous diseases; and in the *Brit. Med. Jour.*, Sept. 1879, p. 498, Dr. Kurz describes the powerfully curative property of the acid.—*Rep.*]

R. NEALE, M.D.

12. *Massini on Hydrobromic Acid.*—Massini (*Corresp. für Schweizer Aerzte*, Sept. 1, 1881) regards this drug as a valuable acquisition to our stock of remedies. While the indications for its administration are the same as those for the other preparations of bromine, such as bromide of potassium, monobromide of camphor, etc., it possesses the advantage over the latter of having a more pleasant taste and of being better borne by weak and sensitive

stomachs. The remedy was administered to thirty-one individuals, with the following results. In four cases—one of violent neuralgia and sleeplessness, associated with cardiac disease, one of insomnia in an insane person, and two of aggravated hypochondriasis—it was of no value; moderate relief was afforded in seven cases—hypochondria with palpitation of the heart, hysteria with the same complication, nervous hyperæmia, hysteria with insomnia, the same with congestions at the menopause, hysteria with intense vertigo, and anæmia in a youth suffering from violent headache upon the least exertion. The acid was productive of marked and sometimes lasting benefit in the remaining twenty cases, comprising examples of nervous palpitation of the heart, insomnia, cerebral congestion and dizziness, paroxysmal headache in an individual affected with multiple sclerosis, congestive toothache occurring during pregnancy, persistent hyperæmia, hysteria, and, finally, pollutions from onanism. The remedy is best given about fifteen minutes after meals, in doses of ten drops of the concentrated (twenty-five per cent.) solution, or twenty to thirty drops of the dilute (ten per cent.) solution, well diluted with sweetened water. No unpleasant after-effects were observed.

13. *Gibson on the Action of Duboisia*.—Dr. G. A. Gibson (*Jour. of Anat. and Phys.*, vol. xiv) has investigated the action of duboisia, the alkaloid of the Pituri plant, on the circulation. He arrives at the following conclusions. 1. Duboisia, in quantities not exceeding 5 milligrammes (0.075 grain), raises the arterial blood-pressure without materially affecting the pulse-rate. 2. In quantities not exceeding 5 centigrammes it diminishes the blood-pressure, and lessens the pulse-rate. 3. In quantities of 5 centigrammes and upwards it causes death, with the heart in a state of diastole. 4. Upon the heart itself duboisia has but little action, except in very large doses, *i.e.*, doses of more than 5 centigrammes, and then it causes arrest of the heart in diastole. 5. Duboisia stimulates the central inhibitory mechanism. 6. The alkaloid paralyses the peripheral inhibitory apparatus. 7. Duboisia stimulates the central vaso-motor apparatus, and causes contraction of the arterioles in small doses; in large doses, it lessens the activity of the central vaso-motor mechanism, and dilates the arterioles. 8. Duboisia has no influence over the sympathetic nerve.

ROBERT SAUNDY, M.D.

14. *Paul on Resorcine*.—This is an abstract of a paper read before the Société de Thérapeutique of Paris at its meeting on the 13th of July 1881. Dr. Paul (*Bullet. Mem. de la Soc. de Thérap.*, July 30, 1881) found that a one-in-a-thousand solution of resorcine disinfected the stools of patients suffering from typhoid fever, rendering them perfectly odourless. Dr. Paul has used the solution as an enema in typhoid fever, so as to disinfect the motions before they are passed. Two a day would check diarrhoea. In the case of a woman suffering from epithelioma of the neck of the uterus with fetid discharge, these injections were of little or no avail in checking the smell.

15. *Callais on Resorcine*.—This is an abstract of Dr. Callais' recent work on resorcine, published by Berthier of Paris (*De la Résorcine et de son Emploi en Thérapeutique: Recherches Expérimentales et Cliniques*). Resorcine is a product obtained from benzine. Chemically, it is closely allied to carbolic acid, and this suggested to Dr. Callais that they might have similar properties. The same idea oc-

curred to Dr. Andeer. The results obtained independently by the two observers are almost identical. Resorcine was discovered in 1860 by Barth and Hlæssivetz, and its properties have since been investigated by Keerner, Oppenheim, G. Vogt, Brieger, Saltmann, Lichtheim, and O. Kahler. Its toxic power is less than that of carbolic acid. In the lower animals, a dose from 30 to 60 centigrammes per kilogramme produces trembling, clonic convulsions, and acceleration of respiration and circulation, all of which disappear in an hour. Sensibility and consciousness remain intact. Above 60 centigrammes per kilogramme intense vertigo and loss of consciousness ensue, sensibility is impaired, clonic convulsions are violent and frequent, and are localised chiefly in the anterior portion of the body; the pupils are dilated, and the pulse and respiration are accelerated. These symptoms last for one or two hours. With doses of from 90 centigrammes to a gramme per kilogramme death ensues in half an hour. *Post mortem* rigidity ensues in a quarter of an hour. The author points out that resorcine is a powerful excitant of the nervous system. It exerts no influence on the blood. Resorcine may be used externally or internally in all diseases due to germs or which favour their development. It has many advantages over carbolic acid; as, for example, its great solubility, its freedom from smell, and its non-irritating properties. A hope is expressed that it may to some extent replace carbolic acid in antiseptic surgery. [Resorcine may be a very useful drug, but the large doses sometimes recommended should not begin without a certain amount of caution.—*Rep.*]

16. *Hammond on the Therapeutic Uses of Nitro-Glycerine*.—At a meeting of the New York Neurol. Soc., held on Oct. 4, 1881, Dr. W. A. Hammond read a paper on the therapeutics of nitro-glycerine. He had used it with much success in the treatment of migraine. A very severe case was described. Previous remedies had done no good. One drop of the one per cent. solution was given; pain almost instantly ceased, and in fifteen minutes the patient was up and well. Five days later she had a similar attack, which was cured as before. She was then put on a regular course of the drug, and for the last nine months has not had a single attack. It was given in from fifteen to twenty cases, with the most complete success. He was satisfied that it was of use in epilepsy, and often gave it in the status epilepticus when the bromides and other remedies had failed. A child who had suffered from epileptic attacks three or four times a week for two years, was cured by drop-doses of the one per cent. solution. He had also used it with benefit in angina pectoris.

WILLIAM MURRELL, M.D.

MEDICINE.

RECENT PAPERS.

1. MCBRIDE.—The Early Diagnosis of Chronic Bright's Disease. (*New York Med. Record.*)
2. LEIFERT.—Multiple Hæmorrhages followed by Diabetes. (*Deutsche Med. Woch.*, No. 17, 1881.)
3. ISRAEL.—Cardiac Hypertrophy and Renal Disease. (*Virchow's Archiv*, Band lxxvi.)
4. FÉRÉ.—The Oculo-Pupillary Phenomena of Hystero-Epilepsy. (*Le Prog. Méd.*, No. 46, 1881.)
5. FÉRÉ.—Hemihyperæsthesia. (*Ibid.*)

6. PROUST and COMBY.—Acute Anterior Spinal Paralysis. (*Le Prog. Méd.*, Nos. 47, 48, 49, 1881.)
7. PETIT.—Aortic Incompetence without Diastolic Murmur. (*Le Prog. Méd.*, No. 491.)
8. LAFONT.—Puerperal Infection in a Man. (*Rivista Clinica de Bologna*, 1880.)
9. HENRY, F. P.—Reduplication of Heart-Sounds. (*Arch. of Med.*, July 1881.)
10. FABRE.—On a Case of Coincidence of Scarlatina and Variola in the same individual. (*Four. des Connaissances Méd.*, Nov. 24, 1881.)
11. DALY, F. H.—Contagious Pneumonia. (*Lancet*, Nov. 1881, p. 824.)
12. MCALDOWIE, A. M.—Infective Phthisis. (*Lancet*, Nov. 1881, p. 825.)
13. WEST, S.—Pulsating Liver. (*Lancet*, Nov. 1881, p. 871.)
14. ALEXANDER, W.—Ligature of the Carotid and Vertebral Arteries in Epilepsy. (*Med. Times and Gaz.*, Nov. 1881, p. 598.)
15. MACKENZIE, S.—Paradoxical Temperatures. (*Brit. Med. Jour.*, Nov. 1881, p. 746.)
16. SHEA.—Pancreatic Abscess with Lumbrici in Duct. (*Lancet*, Nov. 1881, p. 791.)
17. MACKINTOSH.—Feigned Epilepsy and its Treatment by Snuff. (*Lancet*, Dec. 1881, p. 1028.)

1. *McBride on the Early Diagnosis of Chronic Bright's Disease.*—McBride (*New York Medical Record*), in a paper on the diagnosis of chronic Bright's disease, considers the presence of casts 'not so important as was at one time supposed'; he regards high arterial tension as the most constant and valuable symptom, and in the early diagnosis draws attention—1. To the age, hereditary influence, and subjective symptoms; 2. Objective symptoms, particularly the changes in the urine, increased arterial tension, diseased condition of the blood-vessels, cardiac hypertrophy; 3. The associated diseases or complications; 4. The diseases to which Bright's disease occurs secondarily; 5. The previous health of the patient, specially to lithæmia, lead-poisoning, syphilis, or other poisons. In the discussion which followed, Dr. Austin Flint said, speaking of the early diagnosis, that he had met with cases in which a trace of albumen and casts in the urine had proved transient; he regarded hypertrophy of the heart without valvular disease as the most conclusive sign. Dr. Delafield thought too much attention was paid to English writings on this subject, the conditions being very different in America; English descriptions only had a local value. He thought many of the symptoms were due to something other than the renal lesion, as they did not bear a constant relation to it, and this consideration gave some encouragement with regard to treatment. Dr. W. H. Draper did not agree with Dr. Delafield in thinking that the conditions of life in England and America were dissimilar. Dr. Welch alluded to the case of a man who died of hæmatemesis; the necropsy revealed a pore-like opening in the gastric mucous membrane, leading to a miliary aneurism on a branch of one of the gastric arteries which had burst. In that case there was 'wide spread endarteritis obliterans, with small kidneys and hypertrophy of the heart'. Dr. Loomis pointed out the difficulty that existed in discriminating between cases of lithæmia as recently described by Professor Da Costa, and the early stage of chronic Bright's disease depicted by Dr. McBride.

2. *Seifert on a Case of Multiple Hæmorrhages followed by Diabetes.*—Seifert (*Deutsche Med. Woch.*,

1881, No. 17) relates the case of a girl aged 10, free from hereditary predisposition, who, after passing through a slight attack of diphtheritic sore throat, had petechiæ in the skin, 'renal retinal hæmorrhages', etc. The case improved under the use of perchloride of iron, but sugar appeared in the urine and there was great thirst. The sugar remained to the end of the observation, which lasted six months in spite of diabetic diet, codeia, bicarbonate of soda, and salicylate of soda, under which the patient gained weight, and had not finally great hunger or thirst. He suggests that the cause of glycosuria was a hæmorrhage in the medulla oblongata.

3. *Israel on Cardiac Hypertrophy and Renal Disease.*—Dr. Oscar Israel (*Virchow's Archiv*, Band lxxvi, Heft 2) discusses still further the relations between these two conditions. In a former paper he showed that, after the production of atrophy of one kidney by temporarily clamping its artery or after extirpating it altogether, there followed in young animals a compensatory hypertrophy of the other kidney, or in full grown animals a hypertrophy with or without dilatation of the heart. The conclusion to be drawn from this was, that the hypertrophy of the heart depended upon the relative insufficiency of the renal secreting structure. It occurred to him that this conclusion would be strengthened, if the same result could be shown to follow the presence of excess of the urinary constituents in the blood, without any interference with the function of the kidney. He endeavoured to bring this about by making one of the ureters open into the peritoneal cavity from which the urine would be re-absorbed; but the operation to produce this failed; he then fell back on feeding rabbits with urea and with sodium-nitrite. The result showed that animals so fed acquired hypertrophied hearts.

4. *Féré on the Oculo-Pupillary Phenomena of Hystero-Epilepsy.*—M. Féré (*Le Progrès Méd.*, 1881, No. 46) states that he has found that compression of the ovary modifies the size of the pupil, whilst at the same time influencing the attacks. He also states that, where there is hemi-anæsthesia, very precise relations exist between the conjunctival and corneal sensibility and the area of the field of vision and the perception of colours. He has observed a similar relation to exist in non-hysterical patients. During the attacks, he has noticed at first contraction of the iris, then dilatation, and afterwards alternations of contraction and dilatation in the various stages of the attack. In true epilepsy, the pupil is usually dilated throughout, though occasionally it is contracted in the tonic stage, as stated by Gowers.

5. *Féré on Hemi-hyperæsthesia.*—M. Féré (*loc. cit.*) has found that certain cases of hysteria have hemi-hyperæsthesia. This he connects with a form of defective sensation rather than with an increased function. He has met with a case of organic hemi-hyperæsthesia in which there was a lesion in the precise locality where we should look for the cause of hemi-anæsthesia, namely in the posterior part of the internal capsule.

6. *Proust and Comby on Acute Anterior Spinal Paralysis.*—MM. Proust and Comby (*Le Progrès Méd.*, Nos. 47, 48, and 49) relate four cases of acute anterior spinal paralysis, occurring in three young girls of 8, 15, and 16 years, and a man aged 18. A chill was expressly assigned as the cause of the malady in only one case, and suspected in another. Another case followed scarlatina. The father of one suffered from paralysis of the extensors from lead-

poisoning. The initial fever was either absent or extremely slight in three out of the four. In the fourth, the fever was so considerable as to have been mistaken for typhoid. The preliminary pains were absent in all the cases; nor were there any abnormal sensations, formications, etc. The invasion was in one case abrupt, in one rapid, and in the other two slower, that is, in three or four days. In three cases all four limbs were involved; in one, a limb escaped. In two cases, the deltoid became atrophied on the weaker side, in another the right gastrocnemius was alone affected. One case recovered without any atrophy. Trophic disturbance was visible in one patient in the shape, of lividity, and coldness of the feet; in another, the skin became very soft, with lowering of the temperature, eight days after the commencement of the attack. One case recovered completely, and in three atrophy remained in only one muscle. The authors refer to a case, in which an error of diagnosis was made by regarding it as one of acute anterior spinal paralysis in spite of numbness of the hands, and they would in future refuse to admit any but cases of purely motor paralysis as acute anterior spinal paralysis.

7. *Petit on Aortic Incompetence without Diastolic Murmur*.—M. Petit (*Le Prog. Méd.*, No. 49) reports a case of aortic insufficiency, proved by *post mortem* examination, and diagnosed during life by the general symptoms, the character of the pulse, and double murmur in the femoral artery, but in which at no time during life could a diastolic murmur be heard, either at the base or at the apex. The patient was examined by many physicians, and each day M. Féréol and the students listened attentively, but never observed the murmur of aortic insufficiency.

8. *Lapponi on a Case of Puerperal Infection in a Man*.—G. Lapponi describes (*Rivista Clin. di Bolog.*, 1880) the following case which occurred during an epidemic of puerperal fever at the town of Pollenza, in 1876. A man, aged 38, had been married ten years: his wife, a multipara, was confined, and this was followed by rigors and fever; but in spite of this condition the husband engaged in coitus, during which he felt a sharp pain in the penis close to the frenum. That evening he was attacked with fever; the following day he had a rigor and pain in the groin. The medical attendant observed erysipelas of the penis. The fever increased, and on the third day the thermometer stood at 104 deg.; the erysipelas extended to the thigh and scrotum. On the seventh day there were prostration and delirium; on the twelfth day, gangrene of the scrotum, opening of an abscess; and the patient died on the seventeenth day with effusion in the thorax.

ROBERT SAUNDBY, M.D.

9. *Henry on Reduplication of Heart-Sounds*.—The following case of asynchronous contraction of the cardiac ventricles has been reported by Dr. Frederick P. Henry, in the *Archive of Med.*, July 1881. The patient, a multipara, aged 34, had had eight attacks of articular rheumatism, the last one three years ago, at which time her heart-trouble began. There was no œdema; respiration, in the recumbent position, was tranquil; the urine was free from albumen. There was a distinct mitral regurgitant murmur, and also what appeared to be a very irregular action of the cardiac muscle. The pulse was forty-eight per minute, and over the heart's apex could be counted ninety-six distinct pulsations, succeeding each other at regular intervals, and each apparently composed of a complete cardiac revolution. The cardiac sounds were four in number,

the first accompanied by a murmur loudest at the apex; and their rhythm was irregular, the first two and last two succeeding each other more rapidly than did the second and third; that is to say, there was a distinct pause between the separate action of the ventricles, but decidedly shorter than the regular pause occurring at the close of the complete revolution. The intensity of these sounds also varied in degree; the first and third, however, namely, those due respectively to the closure of the mitral valve and the contraction of the left ventricle, and to the closure of the tricuspid valve and the contraction of the right ventricle, being nearly equal in intensity. The patient improved somewhat under treatment, but subsequently she suffered a relapse with very urgent symptoms, and, at her own request, was discharged from the hospital. There are three principal means by which reduplication of cardiac sounds may be produced. The first, most common, and best understood, is the asynchronous closure of the aortic and pulmonary valves, and is not a very rare phenomenon. It occurs both physiologically, as has been shown by Potain, and in disease when, from any cause, the normal ratio of aortic and pulmonary tension is destroyed. This asynchronous closure of the semilunar valve gives rise to the *bruit de rappel* of Bouillaud, and, inasmuch as it is composed of a long sound followed by two short ones, it has been called a dactylic sound, and may be represented by the usual symbol for the dactyl, — ∪ ∪. The second principal cause of the reduplication of cardiac sounds is due to an abnormal action of the left ventricle, giving rise to the *bruit de galop*, also first recognised and named by Bouillaud, but afterward more minutely studied and described by Potain. From its resemblance to the foot of Greek and Latin metre, known as the anapaest, it has been spoken of as an anapaestic sound, and may be represented with considerable accuracy by the usual symbol for the anapaest, — ∪ — ∪. The extra heart-sound which gives rise to the *bruit de galop* is presystolic, and it has been demonstrated as a movement by Potain by means of his cardiograph; and the same observer has shown that the movement is the distension of the ventricle, accomplished and completed by the contraction of the auricle. Potain shows in confirmation of this view that the presystolic movement coincides with the jugular venous pulse constantly encountered in these cases. Potain considers this abnormal sound to be so high in the scale of diagnostic importance, that occasionally it may call attention to the existence of an interstitial nephritis that might otherwise continue unsuspected. Dr. Henry, on the other hand, regards it as of about as much diagnostic value as the retinitis nephritica, of which oculists were wont to talk much in the first flush of their discovery, and of which little is said to-day. Dr. Henry suggests that the sound produced by the asynchronous contraction of the ventricles be spoken of as a double iambic sound, and that it be represented by the symbol of the double iambus, — ∪ — ∪; and, in so doing, he refers to the sound independently of any murmur that may be associated with them. In the only two cases with which he is acquainted, Leyden's and his own, there was valvular disease, of rheumatic origin, giving rise to one or more murmurs. There is one form of valvular disease which, he thinks, entirely prevents the *bruit de galop*, namely, mitral obstruction. The first sound of the *bruit de galop* is due to a diastolic pulsation of the ventricle, caused by an abnormally energetic contraction of the auricle

in the presystolic period, and in order that the auricular contraction may have full effect, the mitral orifice must be unobstructed. This is not said unadvisedly, for in a case of mitral obstruction that was under his care about two years ago, the left auricle had become so hypertrophied that its pulsation could be distinctly felt, and aneurism was at first suspected. This was readily excluded, and mitral obstruction immediately diagnosed. Notwithstanding this abnormally powerful action of the left auricle, there was never detected the slightest diastolic pulsation of the left ventricle.

10. *Fabre on the Existence of Scarlatina and Vaccinia in the Same Individual.*—Dr. Fabre reports in the *Four. des Connaissances Méd.*, p. 606, the case of a child, nine years of age, in good health, who was vaccinated when a month old. At that time one pustule only showed itself, and left a cicatrix, which was hardly visible. On June 21, 1880, the child was re-vaccinated. From the two punctures two large pustules appeared, which on July 3 were from two to three centimètres in diameter. On the 2nd the child was seized with violent headache, and in the evening there was acute irritation over the whole body. On the morning of the 3rd, there was an intense uniform redness over the head and neck, which in the course of the day spread over the trunk and limbs, accompanied by nausea, vomiting, and high fever; subdelirium soon came on. The temperature was 40.3. Cent. (104.5 Fahr.). The pulse marked 14 deg. The submaxillary region was swollen, and tender on pressure. The tongue was red and coated, and the tonsils and soft palate swollen, and covered with a pulaceous coating, easily detached. At last, the scarlatinal eruption became general. There seemed to be no doubt that this was a case of scarlatina; but the question was, how it was contracted. Neither at Commentry, where the case occurred, nor in the neighbourhood, was any other case of scarlatina known. The child from whom the vaccine was obtained had not suffered from the affection. On the 4th the condition was satisfactory. On the 5th there was desquamation of the tongue, the throat cleaned itself, the skin became paler, and the temperature fell to 38 deg. Cent. (100.4 Fahr.). The child complained of pain in the left axilla. Adenitis was found, and lymphangitis, having its starting point round vaccine pustules. On the 7th there was diminution of fever, resolution of the adenitis, and disappearance of the lymphangitis. On the 13th there was general desquamation, almost complete on the 17th. The vaccine pustules were then surrounded by small crusts. The lower pustule was almost dry; the upper one was covered with a large crust, about the size of a shilling. On the 22nd the general condition was satisfactory, excepting a little gastric trouble. The vaccine pustules were almost cicatrised. Recovery was complete on August 10. There were two cicatrices of legitimate vaccine on the left arm. Dr. Fabre remarks that in this case the scarlatina seems to have developed itself without the medium of any contagion. The incubation occurred during the course of a regular eruption of vaccine. The two eruptions occurred simultaneously, without one appearing to influence the other. It becomes a question whether the somewhat slow evolution of the vaccine pustules, which were not thoroughly healed until the thirtieth day, may be imputed to scarlatina. Should it not rather be attributed to the inflammatory symptoms which supervened under the form of angioleucitis and

adenitis? Dr. Fabre also emphasises the fact that the mutual complication of the vaccinal eruption and the scarlatina did not have the effect of increasing the gravity of these two eruptive fevers.

11. *Daly on Contagious Pneumonia.*—Dr. F. H. Daly reports, in the *Lancet*, Nov. 1881, p. 824, six cases of pneumonia occurring in one family, two of which proved fatal. The sanitary conditions of the house appeared perfect, and only four children, who recovered, were attacked, together with their mother and grandmother, both of whom succumbed to the disease. None of the servants, nor the father of the little patients, suffered in any way. [Several papers on this subject have appeared since those referred to at Section 667:3 in the *Medical Digest*. These may be found in the *Lancet*, vol. ii, 1877, p. 324; vol. ii, 1878, pp. 266, 350, 419. Is it possible that some of these so-called infectious cases are due to arsenical poisoning from wall papers? A case that fell under the reporter's notice, many years ago, seemed to lend support to such a view.—*Rep.*]

12. *McAldowie on Infectious Phthisis.*—Dr. A. M. McAldowie relates, in the *Lancet*, Nov. 1881, p. 825, his experience of the infection of phthisis, and can refer four cases, out of four hundred in-patients and many hundreds of out-patients, to this category. Two other cases, where the pneumonic form of phthisis appeared to communicate the disease to healthy persons, are of special interest. In the one case, a younger brother, sleeping with a youth who died of rapid phthisis after six months' illness, became affected soon after his brother's death, and died in three years. In the second case, the wife of a patient showed signs of the disease before her husband's death, and succumbed within two years. [A very suggestive paper on the popular delusions regarding many points relating to consumption, and among these, those which relate to the infection of phthisis, is to be found in the *Med. Times and Gaz.*, Aug. 1863, p. 167.—*Rep.*]

13. *West on Pulsating Liver.*—Dr. S. West showed a man, aged 21, at the Medical Society (*Lancet*, Nov. 1881, p. 871) in whom there was marked pulsation over the whole hepatic region. In the discussion that followed, it was suggested that an aneurism of the hepatic artery, or a collection of fluid in the liver, transmitted the pulsations, or that atrophy and great weakness of the diaphragm might be the cause of the phenomenon. Dr. Powell stated that he always expected marked hepatic pulsations in all cases of extreme aortic regurgitation. Dr. Wilks remarked that it was a question whether there was such a condition as hepatic pulsation. [A very exhaustive paper upon this subject may be consulted in the *Med. Times and Gaz.*, April 1876, p. 413, as well as in the *LONDON MEDICAL RECORD*, Jan. 1879, p. 9.]

14. *Alexander on Ligature of the Carotids and Vertebrales in Epilepsy.*—Dr. Wm. Alexander, in the *Med. Times and Gaz.*, Nov. 1881, p. 598, gives the notes of three inveterate cases of epilepsy cured by ligaturing the left vertebral artery. Three other cases are yet under observation, in which the left vertebral has been ligatured in one case; the left vertebral and left common carotid in another; and in a third, the left vertebral with the right internal carotid. These will be reported in due time, the results so far being most encouraging. [Since the influence of many drugs, more especially the bromides, has become known in the treatment of epilepsy, we have read very little of surgical interference for the cure of the disease. Dr. Billing (*Ranking's Abstract*,

July 1861, p. 60) gives the notes of eleven cases treated by ligature of one or both carotids, four of which resulted in cures; four were improved; one died; and two were unaltered. Dr. Reiner (*Med. Times and Gaz.*, Feb. 1858, p. 175) produced vast benefit in a very severe case of epilepsy by manual compression of both carotids, a mode of treatment for which Trousseau claimed a cure in the case of a child (*Lancet*, Oct. 1857, p. 168) suffering from epileptic (?) convulsions; but which, judging from the symptoms narrated, would now be diagnosed as uræmic.—*Rep.*]

15. *Mackenzie on Paradoxical Temperatures.*—Dr. Stephen Mackenzie publishes, in the *Brit. Med. Jour.*, Nov. 1881, p. 746, the after-history of a case originally reported by Dr. Donkin *in extenso* in the *Lancet*, May 1878, p. 678, March 1879, pp. 368, 401, and notes of which were given in the LONDON MEDICAL RECORD, 1878, p. 254, where the reporter expressed his doubt as to the genuine character of the temperatures noticed. This remark was animadverted upon by Dr. Donkin in his paper of March 1879, as being contrary to evidence. The patient has now confessed that she deceived the observers all through her illness.

16. *Shea on Præcæatic Abscess with Lumbricus in Duct.*—Dr. John Shea, in the *Lancet*, Nov. 1881, p. 791, gives the history of a woman, aged 29, who died in hospital after a fortnight's illness, the exact nature of which was obscure. At the necropsy, the body was fairly nourished, and distinctly jaundiced. The lungs were slightly congested at the base. The liver was large, pale, and soft. The pancreas was enlarged and hard, containing an abscess filled with pus. A round worm, folded on itself, lay in and obstructed the pancreatic duct; the larger portion of the worm was in the duodenum. The intestines were healthy. No other worm was present; none were known to have passed previously. The heart was somewhat large and fatty. The kidneys were pale.

17. *Mackintosh on Feigned Epilepsy, and its Treatment by Snuff.*—Mr. G. D. Mackintosh describes, in the *Lancet*, Dec. 1881, p. 1028, how he readily exposed an impostor, trying to excite the sympathy of the bystanders by an epileptic seizure. Gaining possession of the 'snuff-mull' of a genuine Scotchman amongst the crowd, Dr. Mackintosh freely blew the irritant up the nostrils of the struggling patient, who instantly started up, uttering forcible language, as well as he could, during the momentary intervals of his still more forcible sneezes.

R. NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. KOCHER. — Isolated Disease of the Semilunar Fibro-Cartilages in the Knee-Joint. (*Centralb. für Chir.*, Nos. 44, 45, 1881.)

2. WHITEHEAD, W. — On Excision of the Tongue. (*Lancet*, Oct. 22 and 29.)

3. VINCENT, E. — Treatment of Wounds of the Bladder. (*Revue de Chir.*, Nos. 6 and 7, 1881.)

4. WÖLFLE, A. — Gastro-Enterotomy. (*Centralb. für Chir.*, No. 45, 1881.)

5. DELENS. — A Case of Resection of Exuberant Callus. (*Arch. Gén. de Méd.*, Aug. 1881.)

6. PERRIER. — Suprapubic Lithotomy. (*Soc. de Chir.*, Nov. 9, 1881.)

7. GAY. — Bullet Lodged in Brain for Sixteen Days: Removal. (*New York Med. Record*, Nov. 5.)

8. SPENDER, J. K. — The Immediate Arrest of Epistaxis. (*Brit. Med. Jour.*, Nov. 1881, p. 776.)

9. WRIGHT. — Pulp Disease of the Knee in a Child treated by Erosion. (*Lancet*, Dec. 1881, p. 992.)

10. CALL. — Spontaneous Rupture of the Bladder. (*Lancet*, Dec. 1881, p. 995.)

11. LUCAS, R. CLEMENT. — Excision of both Elbows. (*Brit. Med. Jour.*, Dec. 1881, p. 897.)

12. MARSH, HOWARD. — Treatment of Caries of the Spine in Childhood. (*Brit. Med. Jour.*, Nov. 1881, p. 769.)

13. WILKS, S. — Ear of Corn discharged from the Chest. (*Brit. Med. Jour.*, Nov. 1881, p. 743.)

14. MAGRATH, J. — Pulmonary Gangrene and Caries of Vertebrae from a Panicle of Grass in the Bronchus. (*Lancet*, Jan. 1880.)

1. *Kocher on Isolated Disease of the Semilunar Fibro-Cartilages in the Knee-Joint.*—In a recent paper with reports of cases (*Centralb. für Chir.*, Nos. 44, 45, 1881) Professor Kocher of Berne, after a reference to the views of Volkmann on the important part played in fungous articular disease by primary circumscribed deposits in bone, states that other structures of a joint may be the seats of isolated disease, resulting after a time in general articular disorganisation. Three instances are recorded from the author's practice of circumscribed fungous disease of the internal meniscus of the knee, which disease he would call *meniscitis fungosa*. In one of these cases, the subject of which was a man, aged 65, the disease had lasted for nearly nine months, and had obstinately resisted treatment. Shortly before the case came under the author's notice, there had been swelling of the knee from serous effusion. This patient was cured after the application over the swollen and tender meniscus of the actual cautery. In the two other cases, one patient being twenty-one, the other six years of age, there was not only intra-articular effusion, but the disease had gone on to suppuration and the formation of sinuses. In each of these cases, the diseased meniscus was excised with very good result, and the patient recovered, with free movement of the affected knee. The diagnosis of diseased meniscus in the knee seems to be attended with some difficulty. In Professor Kocher's cases, the most marked swelling and tenderness were by no means circumscribed in correspondence with the margin of the affected cartilage. Before incision into the joint, the internal condyle of the femur in one case, and the head of the tibia in a second case, were thought to be the main seats of the disease. The two cases in which a meniscus was removed prove, it is stated, that the removal of one of these structures impairs so slightly the functions of the knee, that the patient is subsequently able to extend his leg forcibly and to bend it at a right angle to the thigh. A fourth case is reported, of thickening of the external meniscus of the left knee in a lad aged fifteen, through chronic inflammation of the joint. This enlarged meniscus prevented complete extension, interfered with flexion, and caused a loud crepitus. Excision of this structure was followed, after healing by primary intention, by very good functional results. This case proves that the external meniscus may be removed without any consequent impairment of the functions of the knee-joint. In this, as in the cases of removal of the internal meniscus, the leg could not be carried beyond the ordinary degree of extension, and so the cases have some physiological interest

by showing that the menisci do not act as checks in extreme extension of the lower limb. In concluding this paper, Professor Kocher reports a case of advanced disease of the knee, in which recovery with a movable limb followed arthrotomy and extension of the diseased and ulcerated portions of articular cartilage.

2. *Whitehead on Excision of the Tongue.*—Mr. Whitehead, in a pamphlet containing the substance of a paper read before the surgical section of the recent Medical Congress, and reprinted from the *Lancet* of October 22 and 29, submits to the judgment of the profession the merits and the results of his operation for removal of the entire tongue by simple excision. Since the author performed his operation for the first time in November 1877, more than thirty tongues have been removed by the same plan, which consists in dragging the organ well out of the mouth, and then dividing its substance and attachments by a series of successive short snips of scissors, the lingual or any other arteries requiring torsion being twisted as divided. A table is given, which shows that the tongue has been thus removed twenty-eight times, with only one death as the immediate result of the operation. Several cases are quoted of non-recurrence of lingual cancer for several years after free removal of the disease; and there is sufficient evidence, it is stated, to suggest at least that, if the whole of the disease be removed, reasonable prospects of permanent cure may be entertained. The object of all the different ways of removing the tongue, the main features of which may be reduced to the three principles of crushing, burning, and cutting, is to remove the whole of the disease; but which is the one that best fulfils this purpose can only be proved by the results after more extensive experience. Mr. Whitehead objects to crushing as effected by the *écraseur*, on the ground that it more frequently than not fails to accomplish the intended object. If the tissue of the tongue be friable, the mere weight of the instrument has been known to remove the organ or affected part of the organ without the exercise of its special action; and, if the structure of the tongue be firm, the wire generally breaks or fails to prevent hæmorrhage. Removal of the tongue by the galvanic *écraseur* and the galvanic or thermic cautery, has led many surgeons to conclusions that the risks to life are materially augmented, that the operation is frequently followed by secondary hæmorrhage on separation of the eschar, and that this mode of procedure is more prone than any other to engender conditions favourable to septic dangers. Mr. Whitehead does not agree in the opinion, that removal of the tongue by a cutting operation is more liable to be followed by hæmorrhage and also by septic infection. His own experience would induce him to say that the danger from hæmorrhage, when either the knife or scissors is used, is simply *nil*, as the arteries, should they require it, which is not always the case, are either twisted or tied. The difference between crushing and cutting, in the influence over direct septic infection through the lymphatics, demands consideration. If it could be shown that the *écraseur* by crushing occluded the mouths of the lymphatics, as it is credited with closing the arteries, there would be no difficulty in comprehending how one of the channels for the introduction of septic poison into the system would be cut off, and thus would be established the advantage of the *écraseur* over cutting. But it is to be proved, Mr. Whitehead goes on to state, that the *écraseur* is even effectual in crush-

ing the arteries; consequently it cannot be conceded that it closes the lymphatics, which are undoubtedly much smaller. During the last four years Billroth, it is stated, has in removal of lingual cancer entirely abandoned the use of the *écraseur*, and has performed an operation very much resembling the one Mr. Whitehead has been in the habit of practising, without knowing that any other surgeon relied entirely on scissors for excision of the tongue. Billroth's operation consists in removal of the tongue through the mouth with curved scissors, after a preliminary proceeding of ligature of the lingual arteries. The wounds thus formed are utilised as channels for the drainage of the subsequent secretions from the mouth.

3. *Vincent on the Treatment of Wounds of the Bladder.*—In an original memoir (*Revue de Chir.*, Nos. 6 and 7, 1881) on penetrating intraperitoneal wounds of the bladder, Professor E. Vincent of Lyons states that the operation of laparotomy is the only suitable treatment for such injuries when followed by an abundant effusion of urine into the peritoneal cavity. This treatment alone permits—1. Direct inspection of the seat of injury; 2. The determining of the presence and of the nature, if they are present, of complications; 3. Removal from the abdomen of effused blood and urine; 4. Cleansing and disinfection of the peritoneal cavity; and, finally, the prevention of further effusion of urine by applying sutures to the wound through the coats of the bladder. This plan of treatment is rendered justifiable by association with the antiseptic method, and also by the success of laparotomy in abdominal surgery. Moreover, in cases of penetrating wound of the bladder, death is an almost certain result if nothing be done, and even if any treatment short of laparotomy be applied. From an analysis of three reported cases in which wound of the bladder has been thus treated (Walter of Pittsburgh, Heath, Willett), and also from the results of numerous experiments on dogs, Dr. Vincent has drawn the conclusions that it is of great importance in instances of this injury to have recourse to laparotomy as early as possible, and that in this plan of treatment particular care must be taken in applying the sutures to the vesical wound. His experimental researches have demonstrated, it is stated, that intraperitoneal wounds of the bladder are capable of healing by primary intention if securely closed by suture, and that this union is accomplished very rapidly by all the coats of the bladder, except by the epithelial layer of the mucous coat. The outer layer of this coat and the muscular coat join together very quickly, yet with less readiness than the peritoneal coat, the proliferation of which commences almost immediately after coaptation. The sutures are applied very closely together, and in a double set. In one set—the sero-muscular—each suture is passed through the peritoneal and muscular coats of the bladder on each side of the wound; in the other set—the sero-serous—the peritoneum only is traversed, a considerable width of this coat being included on both sides, so that when these sutures are tied wide serous surfaces are brought together in close contact. The mucous membrane of the wounded bladder is not included in any of the sutures. Dr. Vincent concludes from his experiments on dogs that by this plan the wound may be securely closed, and that sutures thus applied will resist vesical tenesmus, and any effort of active contraction or of passive expansion that may be subsequently be made by the bladder. There need not

he states, be any fear of subsequent perforation of vesical wall, through formation of fistulæ along the track of the sutures or in the intervals, or of any ulterior deposition of lithates around sutures shed into the cavity of the bladder. The sutures, being intraparietal, remain at or near the outer surface of the organ. In cystorrhaphy the author prefers a suture of silver wire or of silk to one of catgut. The last material breaks too readily, and is likely to melt away too quickly. Before closing the abdominal wound, it is thought necessary to test the security of the vesical suturing by injecting some coloured and indifferent fluid into the bladder. From a series of experiments on dogs, Dr. Vincent has made out that gun-shot wounds also of the bladder heal by immediate union after application of sutures according to the above described method, unless the deflagration of the powder, or the heat of the projectile, have destroyed the vitality of the tissues at the edges of the wound, and rendered local gangrene inevitable. In such cases, the burnt lips of the perforation should be removed, and adjacent portions of the vesical walls also excised, until the tissues are seen to bleed on section. Dr. Vincent states that, in his experiments on dogs, he has now proved that, as a rule, immediate union results from the immediate application of sutures in intraperitoneal wounds of the bladder by laceration, and through the action of cutting instruments and fire-arms. In such cases, laparotomy, with suturing of the bladder and removal of blood and urine from the abdominal cavity, is likely to prove successful on the dog, when performed within eight hours and a half after the receipt of injury; but in Dr. Vincent's hands, always failed after an interval of twenty-four hours, the animals having succumbed to urinary poisoning. In conclusion, Dr. Vincent, impressed by the success of his experimental investigations on early laparotomy and stitching of vesical wound, argues in favour of suprapubic over perineal lithotomy, and asks why the former operation, which affords free and ready access, is exempt from the danger of wounding important vessels, and is less likely to result in phlebitis and septic poisoning, is not more frequently practised.

4. *Wölfler on Gastro-Enterostomy.*—Dr. Anton Wölfler of Vienna describes in the *Centralb. für Chir.*, No. 45, 1881, an original operation which he performed in September last on a patient with extensive cancerous disease of the pylorus. This patient was a weak and emaciated man, aged 38, who for six months had suffered from symptoms of gastric cancer, and for three months had been unable to retain food, save fluids in very small quantities. A fairly movable tumour, of the size of a lemon, having been felt whilst the man was under anæsthetic influence, Dr. Wölfler performed laparotomy with a view of excising the growth. On its exposure, however, it was found to have extended too far, and to have involved the hepato-duodenal ligament and the head of the pancreas. In order to relieve the patient of his most distressing symptoms, Dr. Wölfler determined on establishing a direct communication between the stomach and some part of the small intestine beyond the seat of the disease. An incision, about two inches in length, was made through the coats of the stomach near the middle of the greater curvature. The whole thickness of the coats of an adjacent portion of small intestine having been incised to an equal extent, the margins of the opening thus formed were carefully stitched to the margins of the orifice made in the stomach. During

the operation on the small intestine, the digestive canal above and below the opening was closed by thick ligatures passed through the mesentery, which ligatures were removed after the margins of the gastric and intestinal orifices had been united by sutures. The peritoneal cavity was thus protected from the discharge of any intestinal contents. The region of the operation having been carefully washed with a solution of carbolic acid, the external wound was closed and covered by iodoform dressings. During this operation all antiseptic precautions were taken, save the use of the spray. There was in this case a rapid recovery from the direct results of the operation; the patient remained quite free from fever, and the wound in the abdominal wall healed by primary intention. The vomiting ceased, and the patient from the time of his recovery was able to take considerable and increasing quantities of food, at first of a fluid and subsequently of a solid nature. After an interval of four weeks, and shortly before the publication of Dr. Wölfler's paper, the man had improved very much in his general condition, and had been relieved of all distressing symptoms. A second case is reported, in which Professor Billroth performed in October a similar operation on a man aged 42, the subject of pyloric cancer, which, when exposed on laparotomy, was found to be too extensive to permit excision. This patient died on the tenth day, after obstinate and excessive bilious vomiting. At the *post mortem* examination the incised portion of small intestine, which was selected about four inches beyond the duodenum, was found to be firmly united to the margins of the opening in the stomach. This piece of intestine having been dragged upwards to join the stomach, a spur or valve had been formed by the unattached coats, which projected into the orifice of communication between the stomach and the small intestine, dividing it into two parts, one, much the larger, communicating with the proximal or duodenal portion of the intestinal tract, the other with the lower portion. This latter opening was very small, and almost completely covered by the overhanging right margin of the gastric orifice. Dr. Wölfler states that the condition observed in this instructive case may, through regard to certain precautions, be readily avoided in any future operations of a similar character.

W. JOHNSON SMITH.

5. *Delens on a Case of Resection of Exuberant Callus.*—This case is reported in the *Archives Gén. de Méd.*, Aug. 1881. A strong healthy man fractured his left clavicle and two ribs on the same side on January 1st, 1881. On March 19th the patient presented himself unable to use his left arm, the muscle of which was considerably atrophied; the integument of the hand was of a violet colour, and a feeling of formication existed in the fingers. The digits could be flexed, and the thumb opposed, but nothing could be picked up. There was no marked diminution of tactile sensibility, but the impulse of the radial artery was manifestly weaker than on the right side. On examination of the clavicle, the outer fragment of the fracture was found overriding the inner one. A voluminous mass of callus, estimated at 5 centimètres (2 inches) firmly surrounded them. On March 19th an incision was made over the clavicle, the periosteum carefully preserved, and by means of forceps, the chain-saw, and gouge, 2 centimètres of the callus, which was very dense spongy tissue, was removed. During the operation, the nerves and blood-vessels were rigorously guarded. The periosteum was then folded over the bone, and the

edges of the incision approximated. The hæmorrhage was not abundant. Antiseptic precautions were used. Immediately after removing the callus, the pulsations of the left radial artery were found to correspond to those on the right side; the integuments of the hand also shortly became normal in colour. On April 23rd, the wound was practically healed. Faradisation of the muscles of the arm was commenced. Ultimately the power of grasp became almost as good as on the healthy side of the body, but the movements of the arm did not regain their normal condition.

6. *Perrier on Suprapubic Lithotomy.*—Two cases of this operation were brought forward by M. Perrier before the *Société de Chirurgie*, Nov. 9, 1881. The first was that of a man who had introduced into his bladder a piece of caoutchouc tubing, and could not withdraw it. Severe cystitis followed, complicated by hæmorrhoids and prolapse of the rectum. The foreign body could not be extracted with the lithotrite. The bladder was, therefore, injected with a weak carbolic solution, and a sound introduced. The rectum was at the same time distended by means of a large enema. The bladder was then opened above the pubes, and the tube extracted. A gum-elastic catheter was introduced into the wound, and the edges of the abdominal walls brought together by sutures. None of these were inserted in the bladder wound. Listerian precautions were observed. On the seventh day the urine was passed *per urethram*; on the twenty-eighth, the patient left the hospital well. The second case was performed for a very large calculus. Death resulted from kidney-mischief, the wound itself being quite healthy. Dr. Perrier advocates distension of the rectum, as facilitating the operation and avoiding injury to the peritoneum. He thinks statistics show that deaths after the operation are generally due to urinary infiltration.

T. F. CHAVASSE.

7. *Gay on a Bullet Lodged in the Brain for Sixteen Days.*—Dr. Gay reports (*New York Med. Record*, Nov. 5) a case in which a ball entered the skull at the left parietal eminence. A probe was passed in three inches downward and forward, but the ball was not detected. As there were no bad symptoms, expectant treatment was adopted. On the twelfth day, dulness, anorexia, delirium, and escape of serum and pus from the wound appeared. On the seventeenth day, the patient was etherised, and a V-shaped flap of the scalp laid back, disclosing the clean-cut circular opening ($\frac{3}{8}$ inch in diameter) made by the ball. Fragments of bone were removed, some from the brain. The ball was found embedded one inch below the surface of the brain. It was brought to the opening by a blunt strabismus hook, but was so flattened that it could not be extracted until the opening was enlarged. No hæmorrhage occurred. The recovery was unaccompanied by any serious symptom. On the twenty-fifth day, the patient was up, and left hospital on the forty-ninth day. Two months after this, he had continued well.

8. *Sponder on the Immediate Arrest of Epistaxis.*—Dr. J. K. Sponder, in the *Brit. Med. Jour.*, Nov. 1881, p. 776, bears testimony to the efficiency of the instrument described by Dr. H. Cooper Rose (*Brit. Med. Jour.*, Jan. 1874, p. 49) for arresting epistaxis. This instrument consists of a thin caoutchouc bag, tied over the end of an India-rubber catheter. This is introduced into the nares and inflated. Dr. Sponder points out the facility of its introduction, the efficiency of its action by even

pressure on all the inflated area, and the possibility of retaining it *in situ* for many hours. [Nothing has surpassed in facility of application, or in efficiency of action, in the reporter's practice, small plugs of cotton-wool, well powdered with tannic acid, and attached to threads, passed along the floor of the nares, pushed well back, and sufficient in number to fill the cavity. In an extreme case of hæmorrhage, subsequent to extraction of a molar tooth, pressure over the cavity, with a plug of cotton-wool thus prepared, arrested in a minute hæmorrhage that had resisted the application of perchloride of iron for hours. Only a few days since, most alarming hæmorrhage, from a newly ruptured hymen, was instantaneously arrested by a similarly prepared plug.—*Rep.*]

9. *Wright on Pulpy Disease of the Knee in a Child Treated by Erosion.*—In the *Lancet*, Dec. 1881, p. 992, Mr. Wright gives the history of a girl, aged 13, who had suffered from pulpy synovitis of the right knee for fifteen months. The joint was laid freely open by an incision across the front, without dividing the ligamentum patellæ. The greater part of the capsule, at the front and sides, was cut away, as it was softened and infiltrated with inflammatory material; the synovial membrane, which was thick, pulpy, and very vascular, and encroached on the edges of the cartilage, was cut and scraped away, together with some of the margin of the cartilage. A softened cavity in the outer tuberosity of the tibia was gouged out, and the articular surface of the patella, which was turned outwards for inspection, was scraped, though but little of its cartilage was removed. The operation was strictly antiseptic. In three months, the child was fat and well, walking a mile, able to run, and to kneel upon and flex the right knee as freely as the left; a fact somewhat remarkable, considering the large amount of diseased tissues and semilunar cartilages removed.

10. *Call on Spontaneous Rupture of the Bladder.*—Dr. T. J. Call reports, in the *Lancet*, Dec. 1881, p. 995, the case of a chimney-sweep, who had long suffered from stricture, in whom retention came on, and, before relief could be given, the bladder discharged itself into the rectum, flooding the whole room. The next day he was up and about as usual.

11. *Lucas on Excision of both Elbows.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 897, Mr. Clement Lucas details at some length the case of a delicate lad, aged 10, in whom, in March 1876, he excised the right elbow, and, in March 1879, the left. The patient was shown at the Hunterian Society in October last. The use of both hands is preserved, while one elbow is fixed at a favourable angle, and the other is capable of the most extensive movements.

12. *Marsh on Treatment of Caries of the Spine in Childhood.*—Mr. Howard Marsh, in the *Brit. Med. Jour.*, Nov. 1881, p. 769, discusses the relative value of Sayre's plaster-jacket, and other remedial measures, in the management of spinal caries in childhood. Mr. Marsh demonstrates that the plaster-jacket does not render the spine passive, as it ought to do, in order to accomplish the desired end, but that the jacket itself is passive, and only adds to the weight which the spine is called upon to raise; so that the jacket does not rest the spine; and intervertebral pressure is not prevented, during muscular exertion, by its use. Mr. Marsh also shows that the jacket, except in young adult females, has no sufficient base upon which to support the superincumbent parts, and also that it has no sufficient grip upon the

parts destroyed and which need supporting. After a careful trial of the jacket, Mr. Marsh is left to the conclusion that the best method at present known for the treatment of spinal caries is that by complete recumbency. This plan, if carefully carried out for the necessary time—extending, it may be freely allowed, from six to eighteen months, or even longer—will generally effect a cure, and it will also prevent the occurrence or increase of deformity. The lamentable distortions which now commonly ensue in the course of spinal caries, can assuredly, Mr. Marsh asserts, be prevented by the recumbent treatment, if applied in the early stages of the disease. The plan is tedious, no doubt, but the time cannot be shortened. Bed-sores are never met with in children fairly attended to. As to failure of the general health from mere confinement to the recumbent posture, this has been greatly exaggerated. A support to the spine, in combination with recumbency, meets with Mr. Marsh's approval, and for this purpose he prefers Cocking's poroplastic jackets.

13. *Wilks on an Ear of Corn discharged from the Chest.*—Dr. Wilks (*Brit. Med. Jour.*, Nov. 1881, p. 743) showed at the Pathological Society an ear of corn which was discharged from an abscess over the suprascapular region of a child. The foreign body had evidently entered the bronchus, and thence worked its way outwards.

14. *Magrath on Pulmonary Gangrene and Caries of Vertebrae due to a Panicle of Grass in Bronchus.*—In the *Lancet*, Jan. 1882, p. 89, Dr. J. Magrath reports a case in which a lad, aged seven, was seen a few hours after having swallowed a panicle of grass. He died twelve weeks subsequently, after much suffering. At the necropsy, one-third of the lower part of the right lobe of the lung was gangrenous; the gangrenous mass was riddled with cavities, in one of which lay the head of grass, blackened, but scarcely altered in consistence. It was about three-quarters of an inch long, with its apex downwards. The bodies of two of the dorsal vertebrae were excavated and carious.

R. NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

1. LEUBE.—Bacteria in Fresh Urine. (*Zeits. für Klin. Med.*, Band iii.)
2. HERTZ.—Lipæmia in Diabetes and other Diseases. (*Deutsche Med. Woch.*, No. 27, 1881.)
3. BELOUSSOW.—The Consequences of Ligaturing the Ductus Communis Choledochus. (*Arch. für Exper. Path.*, Band xiv.)
4. DU CAZAL.—On Hæmoglobinuria. (*Le Prog. Méd.*, 1881, No. 32.)
5. TALMA.—Consequences of Ligature of the Renal Artery. (*Zeitschr. für Klin. Med.*, Band ii.)
6. JOLLY.—Fat-Embolism in the Insane. (*Arch. für Psych.*, Band xi.)
7. WALTON.—Cysticercus in the Spinal Cord. (*Boston Med. and Surg. Jour.*, Dec. 1, 1881.)
8. DEBOVE.—On Osseous Lesions in Hemiplegia. (*Jour. de la Soc. des Hôp.*, p. 604.)
9. RICKARDS, E.—Calcareous Pericardium. (*Brit. Med. Jour.*, Nov. 1881, p. 772.)
10. REICHERT.—The True Nature of Tetanus. (*Philadelphia Med. Times*, Aug. 23, 1881.)

1. *Leube on Bacteria in Fresh Urine.*—Leube (*Zeits. für Klin. Med.*, Band iii, p. 233) has investi-

gated the freshly passed urine, to discover whether it contains bacteria. This was done by having it passed with certain precautions under mercury. He found that in these circumstance it remained for weeks and months acid, clear, and free from micro-organisms. He concludes, therefore, that these organisms, when present, have been introduced into the body from without, or have entered the urine after it has left the body.

2. *Hertz on Lipæmia in Diabetes and Other Diseases.*—Hertz (*Deuts. Med. Woch.*, 1881, No. 27) records the case of a servant-maid, aged 17, who had suffered from glycosuria for a year, and died of diabetic coma. At the necropsy he found sclerosis of the cranium, great density of the brain, and a peculiar bright brown colour of the blood. On standing this gave, instead of serum, a yellowish-white milky fluid, which consisted of an emulsion of the finest fat-drops. Besides in diabetes, he has observed lipæmia in drunkards, and sometimes in acute pneumonia. As these all recovered, this condition of the blood does not seem to play a very important part.

3. *Beloussow on the Consequences of Ligaturing the Ductus Choledochus.*—Beloussow (*Arch. für Exp. Path.*, Bd. xiv, p. 200) tied the ductus choledochus with antiseptic precautions in eighty animals, using guinea-pigs, rabbits, and dogs. The animals recovered well from the operation; but in the course of six or eight days they lost appetite, became sleepy, wasted, and, in a few cases, showed slight tonic and clonic contractions in the muscles of the head and extremities. There was general jaundice, sometimes severe, sometimes slight; and the urine contained bile-pigment. The maximum time the animals were kept alive was eighteen days. Within this period, the flow of bile was never restored. On dissection, the seat of operation showed nothing, or, in general, a fibrinous layer at the seat of the ligature, with adhesive inflammation of the serous coat of the adjoining intestinal loops; in uncomplicated cases there was no suppuration. The ducts and gall-bladder were dilated, and the bile contained mucus, epithelium, and granules of bile-pigment, but no bacteria. The liver was never much enlarged; its surface was smooth, with a few insular depressions, but over its surface, and throughout its substance, were numerous greyish-yellow patches, varying in size from a pin's head to a lentil. They were to be seen as early as four to eight hours after the application of the ligature, and increased in number during the next six days; about the tenth day they became rare, and at the eighteenth day none were to be found. These patches, on microscopical examination, consisted of an irregular network, containing a few liver-cells undergoing degenerative changes, in which loss of the nucleus was constant and early. They were surrounded by a zone of inflammation, and later on the patches became the seat of a new growth of connective tissue. These patches were not reached by injection from the portal vein, but were filled from the bile-duct. They might be produced artificially by injecting forcibly an indifferent fluid (salt solution) into the ducts; they were not present when the bile was allowed to flow out through a hole in the gall-bladder. These facts make the author regard these patches as portions of necrosis due to great dilatation, and perhaps rupture, of the capillary gall-ducts; and the subsequent new formation of connective tissue, as an attempt to repair the breach of substance. He regards this mechanical action as the principal, if not the only, result of

the ligature, and points out that the essential element for the production of this change is that the closure of the duct should be sudden; where, as often occurs in human pathology, the closure is gradual, and for long imperfect, no such consequences are met with.

4. *Du Cazal and Hayem on Hæmoglobinuria.*—Du Cazal (*Le Prog. Méd.*, 1881, No. 32) has described another case of paroxysmal hæmoglobinuria in which the first attack came on in August without assigned cause; but later attacks were induced by exposure to cold. The urine contained no blood-corpuscles immediately after it was passed. There was pain in the lumbar region and epigastrium, and the temperature rose to 102.2 deg. F. In the discussion which followed, M. Hayem said he had frozen blood in order to see whether cold alone would dissolve the blood-corpuscles; but the result was negative, as was also the injection into the veins of a quantity of water equal to half the volume of the blood. He further remarked that most of the cases of hæmoglobinuria hitherto recorded were in subjects of syphilis; it was interesting to note, therefore, that the history of M. du Cazal's patient was free from this, as was also that described recently by M. Dumontpallier.

5. *Talma on the Consequences of Ligature of the Renal Artery.*—Talma (*Zeits. für Klin. Med.*, Band ii, p. 483) found that the kidneys when examined one-and-a-half, four, five, and twenty hours, up to two to six days after ligature, showed, at first, hyperæmia and swelling, followed by anæmia and shrinking of the organ. Ligature of a branch caused similar changes in the part supplied by it. As Meindersma has shown that ligature of the artery does not lead to back flow from the vein, he attributes the early hyperæmia and swelling to the swelling of the epithelium, which hinders the passage of the blood.

6. *Jolly on Fat-Embolism in the Insane.*—Jolly (*Arch. für Psych.*, Band xi, p. 201) describes three cases in which fat embola was found after simple mechanical rupture of the fat-cells of the subcutaneous connective tissue, without injury to bones. Symptoms were present during life, only when the embolism of the pulmonary vessels was very extensive.

7. *Walton on Cysticercus in the Spinal Cord.*—Dr. G. L. Walton (*Boston Med. and Surg. Jour.*, Dec. 1, 1881) reports a case of cysticercus in the substance of the spinal cord, under the care of Prof. E. Wagner at Leipsic. It occurred in a widow, aged fifty-six, who was admitted in the last stage of her illness. She was emaciated; there were bed-sores over the sacrum and thighs; only partial movement of legs remained; no reflex movement; complete loss of sensation; no tendon-reflex in legs; pupils equal; no paralysis of arms. She passed fæces and urine in bed, and was delirious. The temperature ranged from 37 deg. to 41 deg. C. (96.6 to 105.8 Fahr.). At the necropsy, there were several cysts on the surface of the brain, and one in the anterior part of the corpus striatum. The spinal cord showed typical appearances of tabes. The cyst was in the upper cervical region, occupying the position of the grey matter on the left side.

ROBERT SAUNDY, M.D.

8. *Debove on Osseous Lesions in Hemiplegia.*—At a recent meeting of the Société des Hôpitaux in Paris, M. Debove read a paper on osseous lesions in hemiplegic cases. He said that he had frequently observed, at the Bicêtre, hemiplegic patients who had sustained fracture on their paralysed side, which

would tend to create belief in the existence of previous osseous lesions. He therefore examined old hemiplegic patients in whom the lesions were more pronounced. In them, he found, on examining the humeri was that the bone of the side attacked less heavy, that its central canal was enlarged, that the substance of the bone was less compact, especially in approaching the medullary canal, where the tissue soon became spongy. Histological examination shows the nature of the lesions. In the specimens prepared according to the ordinary methods, M. Debove easily ascertained that the Haversian canals were dilated. This explained the porosity that could be seen, even with the naked eye, the preparations being remarkably transparent. This osteoporosis, he said, was more distinct when sections had been made near the medullary canal. Chemical analysis has shown that it was more abundant in the diseased than in the healthy bone. It is easy to understand that this abundance is due to the increase, in the dilated Haversian canals, of the fat which is there met with in a normal condition. The condition under consideration is therefore the simple osteoporosis. With regard to the progress of the fractures in bones thus diseased, M. Debove thinks that they become consolidated like fractures in healthy bones, perhaps a little more quickly, but with a more voluminous callus. There is but little information on the subject in the works of those who have written specially on it. Many confound hemiplegic with ataxic patients. Therefore, it would be important for ulterior researches first to establish the diagnosis of the nervous affection rigorously.

9. *Rickards on Calcareous Pericardium.*—Dr. Edwin Rickards, in the *Brit. Med. Jour.*, Nov. 1881, p. 772, details a rare case of calcified pericardium taken from a woman between thirty and forty years of age. *Post mortem* examination showed the pericardium entirely adherent to the heart; the portion covering the auricles and large vessels being slightly thickened; while the portion covering the ventricles was converted into a calcareous chamber, with the exception of two small spots corresponding to the apices of the ventricles. Dr. Rickards thinks that calcareous pericardium is the result of pyo-pericarditis, the pus undergoing caseation, and ultimately calcification. Hitherto calcareous pericardium has been described under the heading of adherent pericardium. [Various cases of adherent pericardium and pyo-pericarditis are noticed in the *Medical Digest*, Section 760, 3 and 5. In the *Lancet*, Jan. 1881, p. 91, is reported Dr. Latham's case of calcified pericardium shown at the Cambridge Medical Society. In front of the heart, and around the sharp margin of the right ventricle, the pericardium was changed into an uniform hard osseous or calcareous case, of such thickness and hardness, and so closely united to the substance of the right ventricle, that the latter cavity had to be opened (from the apex) with a saw. A similar calcareous or callous condition of the pericardium extended to the base of the heart, and included the region of the right auricle, and partly of the left auricle, and of the ascending part of the aortic arch.—*Rep.*] R. NEALE, M.D.

10. *Reichert on the True Nature of Tetanus.*—Dr. Edward T. Reichert, formerly Demonstrator of Experimental Therapeutics in the University of Pennsylvania, has published in the *Philadelphia Med. Times* of Aug. 13, 1881, a valuable and interesting communication, entitled, 'Convulsions due to Depression of Spinal Reflex-Inhibitory Centres, with Special Reference to the Convulsions

of Apomorphia, Strychnia, and other poisons'. It is still a prevalent belief that convulsions are invariably due to direct or indirect stimulation of the cerebral or spinal centres, or of the nerve-peripheries or muscles, even in the case of certain drugs which in every other respect either depress the nervous structures, or do not appreciably affect them; nothing is more common when they give rise to convulsions, to find it stated that the phenomena are due to stimulation of certain portions of the nervous system, more especially the cord. Dr. Reichert's attention was directed to the subject whilst investigating the physiological action of apomorphia, which he found to induce a co-existent condition of paralysis and convulsions. Animals poisoned by this drug, he says, 'would be as if lifeless, and no reflex action could be elicited by any sort of stimuli; yet suddenly a hyperæsthetic condition would appear, and the slightest touch, or sometimes even a breath of air, would induce most violent tetanic convulsions, which were sometimes so very decided and persistent that the animal would die in a rigid condition, and be found in the course of several days dried in an opisthotonic state. Upon testing the action of apomorphia on the motor and sensory nerves, it was found to depress both decidedly, and no evidences of a stimulation of these structures could be discovered; and in a very careful series of experiments on its action on the spinal cord, not the least signs of stimulation could be observed, except during this hyperæsthetic condition; and, furthermore, the convulsions occurred in the posterior portion of the body after section of the cord in the upper dorsal region, showing that they were spinal.' [It is difficult to understand how a drug could at one and the same time act as a depressor and stimulator of structures so intimately associated as the motor and sensory tracts of the spinal cord; and it is equally difficult to see how it could possibly cause a state of such profound paralysis, and yet in a little while, and in the midst of it, and during a continued absorption of the poison, for a condition of decided stimulation to appear. The phenomena observed could be explained only on the supposition that the drug acted on certain hypothetical spinal reflex-inhibitory centres, presumably similar in their functions to those discovered by Setschenow in the base of the brain.—*Rep.*] Dr. Reichert refers at some length in support of his argument to the classical researches of Fraser and Crum Brown (*Trans. of the Roy. Soc. of Edin.*, 1866, etc.), and to other papers on the physiological action of box (*Buxus sempervirens*), and gelsemium (*Trans. of the Medico-Chir. Soc.*, 1876, and *Jour. of Anat. and Phys.*, 1877).

WILLIAM MURRELL, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. CAMPBELL, H. F.—The Prophylactic and Therapeutic Value of Quinine in Gynecological and Obstetrical Practice. (*American Gynecol. Trans.*, vol. v, 1881.)
2. DEPAUL.—Gestation Extended to Eleven Months. (*Acad. de Méd.*, Séance du 16 Aout 1881.)
3. DIXON.—Perineal Sutures. (*Boston Med. and Surg. Jour.*, Nov. 10, 1881.)
4. ENGELMANN, G. J.—Pregnancy, Parturition, and Childbed among Primitive People. (*American Jour. of Obstet.*, Oct. 1881.)
5. GOODELL, W.—On Laceration of the Cervix Uteri. (*Obstet. Gaz.*, Cincinnati, Oct. 1881.)

6. GOODELL, W.—Pregnancy in a Case of Uterus Bicornis.

7. HAMANN.—A Case of Pseudo-Osteomalacic Pelvic Deformity. (*Thesis*, Halle, 1881.)

8. HELOT.—The Power of Electricity in Provoking Uterine Contractions. (*Annales de Gynéc.*, Nov. 1881.)

9. HERRICK, O. E.—Leucorrhœa, Abscess of the Labia, and Thrombus. (*Obstet. Gaz.*, Cincinnati, Oct. 1884.)

10. LOEB.—On the Correlation of Diabetes Mellitus with Disease of the Female Genital Organs. (*Berl. Klin. Woch.*, 1881, No. 41.)

11. LORENTZEN, L.—Extra-uterine Gestation. (*Hospitals-Tidende*, 1881, July 27.)

12. MIHALKOVICS, G. VON.—On the Topographical Position of the Female Sexual Organs. (*Centralb. für Gynäk.*, den 26 Nov. 1881.)

13. NAPIER, A. D.—Clinical Observations on Puerperal Temperatures. (*The Edinburgh Obstetrical Society*, June 1881.)

14. NEVILLE, W. C.—Physical Examination of the Abdomen in Labour Patients. (*Dublin Med. Jour.*, Oct. 1881.)

15. SINÉTY.—On the Relation between Membranous Dysmenorrhœa and Normal Menstruation. (*Acad. de Méd.*, Séance du 6 Sept. 1881.)

16. TEUTLEBEN.—A New Method of Intra-uterine Application of Perchloride of Iron. (*Centralb. für Gynäk.*, den 26 Nov. 1881.)

17. WILSON, H. P. C.—Ovariectomy during Pregnancy. (*American Gynecol. Soc. Trans.*, vol. v, 1881.)

18. WYLIE.—On the Etiology, Pathology, and Prevention of Laceration of the Cervix Uteri. (*Med. Soc. of the County of New York*, Sept. 26, 1881.)

1. *Campbell on the Value of Quinine in Obstetrics and Gynecology.*—Dr. Campbell concludes an exhaustive paper with the following remarks. An exalted reflex excitability of the cerebro-spinal centres, as well as general plethora, may be recognised as a characteristic condition of the pregnant woman from the date of conception to the completion of involution. This provisionally increased development and polarity, intended for fetal and uterine growth, renders the woman during its continuance eminently liable to become the subject of various morbid reflex actions, more or less peculiar to her condition. These reflexes are of two perfectly distinct and dissimilar kinds, differing widely, as they may happen to occur, before or after parturition. During the entire period of pregnancy, and until after labour, the reflexes are of an excito-motory character, restricted to the muscular apparatus of the uterus and of general volition. They are apyrexia and non-inflammatory. Their paroxysms threaten premature expulsion of the fœtus in pregnancy, and eclamptic convulsions in labour. After parturition, the reflexes are of an excito-secretory character. They are propagated through the ganglionic or vaso-motor nerves, to the blood-vessels and capillaries of the pelvic organs and tissues of the general system. They are marked by fever, congestion, and inflammation, with their products and consequences. Septic fever and peritonitis, with arrest of involution and mammary abscess, are their not uncommon results. Quinine, by its contractile action on the capillaries of the cerebro-spinal centres, exanguinates their nervous structure, and more than any known agent depresses the reflex excitability from which the varied morbid phenomena of both pregnancy and child-bed originate. Quinine, except in cases of idiosyncrasy, or from an injudicious administration of the agent, exercises no influence whatever to superinduce premature expulsion of the

fœtus. Moderate cinchonism, adjusted to the type and approach of the paroxysmal neuroses which endanger the welfare of the fœtus during pregnancy, is one of our most efficient resources in many cases of threatened abortion and of premature labour. During parturition, it may give steadiness to irregular uterine contractions; and, continued during labour, cinchonism is in a most valuable degree prophylactic against threatened eclampsia. The reflexes of childbed, pertaining as they do, primarily and principally, to the recently evacuated uterus—well likened to an organ in a traumatic condition—opportune and ready for the awakening of fever and inflammation, are of the gravest character, frequently tending to disorganization and death, or else to permanent and irreparable injury. These reflexes constitute a dreaded class of diseases, most commonly called 'puerperal', which, by universal consent, must be prevented rather than trusted to efforts, often unavailing, for their cure. To this end, the most valuable and reliable prophylactic method will be found to consist in the daily administration of quinine, to the degree of moderate cinchonism, from the day of parturition, to be continued daily until normal involution is safely secured. By the observance of this routine, as a rule, it is believed that the occurrence of puerperal diseases will be largely prevented, and that the rate of childbed mortality will be greatly diminished. Cinchonism, in its quality of preventing and controlling inflammation, whether traumatic or idiopathic, and of suppressing suppuration, all of which is due to its power over reflex excitability of the cord, and its action on the capillaries, has a claim to antiseptic value superior to Listerism, and is less to be dispensed with than carbolic acid, or any of the means and appliances of the recognised antiseptic method. In general surgery, and especially in uterine surgery, as well as after parturition, the combination of carbolised irrigations and applications to diminish peripheral excitability, with persistent cinchonism to depress centric excitability, should constitute hereafter an antiseptic method more trustworthy, generally practicable, and less to be dispensed with than the most faithful observance of the complex Listerian process. [While bearing willing testimony to the value of quinine in lessening the mortality, and more especially the morbidity during the lying-in state, the reporter regards Listerian precautions as being at least equal in prophylactic and therapeutic power to cinchonism. In the British Lying-in Hospital the two, Listerism and cinchonism, go together, and are regarded as twin sisters, the one being the complement of the other. In fact, the reporter looks upon cinchonism, by its power of contracting the uterus, as an integral part of the true antiseptic method.—*Rep.*]

5. *Goodell on Laceration of the Cervix Uteri.*—Dr. Goodell is of opinion that an important cause of laceration of the cervix is too early rupture of the bag of waters. There is no doubt that, in a multipara, rupture of the membranes will hurry labour through. The temptation to rupture the membranes is therefore very strong, and a frequent result is laceration of the cervix. He believes the membranes should not be ruptured until the os is dilated. Dr. Goodell has performed Emmet's operation 130 times. Inflammation only followed in two, both of whom were hospital patients. In operating, Dr. Goodell does not use a carbolic spray, but a 2½ per cent. solution of carbolic acid is applied to the parts. In securing the sutures he uses shot.

The shot are useful in all plastic operations for laceration of the perinæum, cervix, and vesicovaginal fistula.

6. *Goodell on Pregnancy in a Case of Uterus Bicornis.*—Dr. Goodell relates a case in which a dwarf, aged 39, had a pregnancy in one horn of an uterus bicornis. When he first saw the case, he took it for an extra-uterine foetation. He had made up his mind, when the woman was nearly at full term, to deliver by abdominal section. He was induced, however, by feeling the alternate expansion and contraction of the tumour, to think it must be contained in uterine tissue (Braxton Hicks' test). He, therefore, postponed the operation in order to await events. The result was that four days later the patient was delivered *per vias naturales* of a small living child. He afterwards very carefully examined the uterus, and found it to be an uterus bicornis. In the one horn the ovum had developed; into the other, Dr. Goodell had passed his sound when examining during the pregnancy, and so been led into thinking the gestation to be extra-uterine.

16. *Teutleben on a New Mode of Applying Perchloride of Iron inside the Uterus.*—In order to avoid the possibility of solutions of perchloride of iron escaping into the peritoneum through the Fallopian tubes, Dr. Teutleben has solid sticks of perchloride of iron. These are kept in sealed glass tubes, to prevent them from deliquescing. The iron is thus introduced into the uterus by Chiari's caustic-carrier, and there melts, and escapes through the perforations in the carrier into the uterus.

17. *Wilson on Ovariectomy during Pregnancy.*—Dr. Wilson relates the following case. Mrs. B., aged 40, mother of nine children, was brought to Dr. Wilson as suffering with ovarian disease. He found a large tumour growing from the right ovary; also a pregnancy of nearly four months. Dr. Wilson operated for ovariectomy on Nov. 3, 1879. The tumour was multilocular; one large sac contained about three gallons of very dark fluid; another contained cheesy matter; and a third some semi-gelatinous fluid. The abdominal opening had to be enlarged to three inches to get the tumour through. It was adherent at one point to the intestine, and also to the omentum. The adhesions were touched with liquor ferri subsulphatis. The pedicle, an inch long, was transfixed with a needle, armed with a double ligature of carbolised silk. The stump of the pedicle, after being touched with subsulphate of iron, was dropped into the pelvic cavity. The abdominal wound was closed with five silver wire sutures, and dressed with antiseptic precautions. It should be mentioned that, on the night of Oct 31, she was seized with great pain on the right side, just within the crest of the ilium. The next day, there were much tenderness and very marked blue colour over the whole abdomen. Distension, shortness of breath, and suffering, made her press for an operation. At the operation, the pedicle was found to be twisted upon itself, and, on being severed, several clots of blood rolled out, due, Dr. Wilson thinks, to rupture of some vessels, which occurred during the severe pains and suffering thirty-six hours before the operation. It was not until after this night of great distress that the mulberry-blue appearance over the whole abdominal surface was observed. The deep claret colour of the fluid contained in the large cyst was undoubtedly due to admixture with blood from the same cause. Were such an appearance as above mentioned to occur in the abdomen to Dr. Wilson again, he

would diagnose a twisted or apoplectic pedicle, and operate at once. The mother recovered, and went to term, when she was delivered of a healthy female child. Dr. Wilson remarks that statistics seem to show that ovariectomy in pregnant women, previously to the sixth month, is more successful to the mother, and vastly more successful to the child, than the same operation at a later period. He therefore advises that, where pregnancy and ovarian disease are seen to co-exist, and the ovarian tumour is so large as to make it doubtful that the tumour and pregnancy can together advance to term, ovariectomy should be performed previously to the sixth month, provided that the tumour be such as to justify an operation if no pregnancy exist. Tapping and expectant treatment will not, in his opinion, produce as good results as prompt removal of the ovarian tumour under antiseptics.

18. *Wylie on Laceration of the Cervix Uteri.*—Dr. Wylie says that the reasons why laceration is so much more frequent through the lateral than the anterior or posterior aspects of the os uteri are these.

1. The longest diameter of the pelvis at the brim is transverse, and, therefore, the longest diameter of the head is directed transversely. 2. The position and attachment of the uterine ligaments favour lateral laceration. 3. The rectum and bladder pad the anterior and posterior walls of the cervix when fully dilated. 4. The muscular structure of the cervix favours its anterior and posterior walls. Dr. Wylie does not accept Emmet's theory that the cicatricial plug, usually found at the bottom of the laceration, causes a hyperæsthetic condition in the womb, which, by reflex action, greatly disturbs the health of the patient in some cases. He thought the condition was similar to what was found in other portions of mucous membrane where there was no cicatricial plug; for example, sensitive spots in the vaginal cervix, in the female urethra and vagina, in the prostatic portion of the male urethra.

FANCOURT BARNES, M.D.

SYPHIOGRAPHY.

RECENT PAPERS.

1. MITCHELL, C. L.—Gonorrhœal Prostatitis. (*Philadelphia Med. Times*, July 16, 1881.)

2. WEBSTER, DAVID.—On Syphilitic Iritis. (*New York Med. Rec.*, July 30, 1881.)

3. WILSON, W. D.—The Treatment of Gonorrhœa by Injections of Sulphurous Acid. (*Lancet*, July 30, 1881.)

4. MARTINEAU.—Secondary Syphilides of the Cervix Uteri. (*L'Union Méd.*, No. 111, 1881.)

5. HANOT.—Glioma of the Pia Mater in a Young Syphilitic Woman; Epileptiform Attack, with Rise of Temperature; Death. (*Progrès Méd.*, No. 24, 1881.)

6. VELARDI.—On Syphilitic Choroiditis. (*Giorn. Internazionale d. Sci. Med.*, and *Gaz. Med. Ital.*, Lombardia, No. 26, 1881.)

7. DIDAY.—On the Digital Application of Caustic to the Pharynx. (*Lyon Méd.*, Nos. 33, 34, 1881.)

8. RICHON.—Indurated Chancre of the Eyelid followed by Early and Severe Secondary Symptoms. (*Gaz. des Hôp.*, No. 78, 1881.)

9. THIRY.—On the Treatment of Phagedæna by Cyanide of Mercury. (*Presse Méd. Belge*, No. 44, 1881.)

10. COWELL.—A Case of Syphilitic Papilloma (*Lancet*, Aug. 27, 1881.)

11. HECKER.—On Syphilis in Pregnancy, and its Effects on the Offspring. (*Wiener Med. Blätter*, No. 37, 1881.)

12. MERKLEN.—Chancre of the Tonsil Simulating Epithelioma in a Woman aged 64. (*Annales de Derm. et de Syph.*, No. 4, 1881.)

13. BROADBENT.—A Case of Syphilitic Paralysis of the Facial, Spinal Accessory, and Hypoglossal Nerves. (*Lancet*, Nov. 5, 1881.)

14. DEBEL.—On the Communication of Syphilis by Skin-Grafting. (*Progrès Méd.*, No. 46, and *Gaz. des Hôp.*, No. 127, 1881.)

15. DOWNES.—Six Cases of Syphilitic Necrosis of the Jaw. (*Lancet*, Nov. 19, 1881.)

1. *Mitchell on Gonorrhœal Prostatitis.*—Dr. C. L. Mitchell recommends (*Philad. Med. Times*, July 16, 1881) in chronic prostatitis the application of suppositories to the prostatic urethra, by means of a curved cannula ten inches long, with a well-fitting stilette. The suppositories are half an inch long and composed of cocoa-butter or gelatine, containing opium, belladonna, iodoform, ergotine, or some other drug, according to the nature of the case. The cannula is passed down to the prostate, and the bougie protruded by means of the stilet, and left to dissolve. Sometimes the bougies do not answer, in which case the author advises the injection of drugs in solution by means of a syringe and long tube ending in a bulbous extremity, and perforated with holes directed backwards, through which about a drachm of the fluid is injected. Nitrate of silver is only resorted to when other means fail.

3. *Wilson on the Treatment of Gonorrhœa by Injections of Sulphurous Acid.*—Surgeon-Major W. D. Wilson states (*Lancet*, July 30, 1881) that an injection of one part of sulphurous acid to fifteen of water is very effective in gonorrhœa. He finds it necessary for an attendant to administer the injection, which should be used three times a day and retained from three to five minutes; but, if much pain be produced or there be tendency to chordee, the injection is only to be used once or twice a day. The patient is to be kept on low diet. The author states that he has treated sixteen cases in this way, using no other medicine, and that all the men returned to duty in an average of six days. If the treatment be strictly carried out the purulent discharge is said to become scanty at the end of the first day, and to cease altogether in five days. The acid must be fresh.

4. *Martineau on Secondary Syphilitic Affections of the Uterus.*—In presenting a thesis on this subject by his pupil M. Foulquier, to the Société Médicale des Hôpitaux (*L'Union Méd.*, 1881, No. 111), M. Martineau remarked that he agreed with M. Fournier in considering the vaginal mucous membrane of the cervix uteri to be a frequent seat of papular, erosive, and sometimes of ulcerating syphilides; but that he had never seen syphilitic roseola in that situation, nor the exulcerative hypertrophy of the cervix described by Martin and Fourcault. M. Martineau, however, could not agree with M. Fournier that syphilides were more common on the cervix than on other parts of the vaginal mucous membrane. Syphilitic lesions were frequent on all parts of the vaginal wall.

7. *Diday on the Digital Application of Caustic to the Pharynx.*—In obstinate syphilitic affections of the tonsils and pharynx, M. Diday advises the application of acid nitrate of mercury by the finger of the medical attendant (*Lyon Méd.*, 1881, Nos. 33 and 34). The author states that he himself has of late adopted this method, because the acid can be more exactly and effectually applied, and also

because of alarming symptoms of laryngeal spasm which he has observed when the application was made in other ways. The author slightly moistens the pulp of his forefinger with the caustic and carries it rapidly backwards to the mucous patch or ulcer to be cauterised. He then washes his finger immediately. M. Diday states that he has never been bitten by the patient while carrying out this plan of treatment; but that he once grazed his finger against a sharp tooth. The prompt application of strong nitric acid, however, prevented contagion.

9. *Thiry on the Treatment of Phagedænic Chancres by Cyanide of Mercury.*—A woman, aged 35, of good constitution, was admitted into the St. Pierre Hospital at Brussels (*Presse Méd. Belge*, 1881, No. 44) under the care of M. Thiry, with three chancres of the genital organs, and several ulcers of the soft palate and tonsils, which M. Thiry also considered to be chancres. The affection was recent, and there were no signs of syphilis. The ulcers of the tonsils and velum healed in a fortnight under the use of a nitrate of silver gargle, but the genital sores became phagedænic. The phagedæna continued in spite of various applications for three months, when an ointment of 1 gramme (15 grains) of cyanide of mercury to 20 grammes (5 drachms) of lard was applied. This caused great pain, and the dressing was removed on the following day and a lotion of tartarated iron used. Five days later the ointment was re-applied, and morphia injected subcutaneously to allay pain. Quinine and other tonics were also given. Five more applications of the cyanide were necessary at various intervals before cicatrization took place, the woman being under treatment altogether for over six months. No signs of syphilis appeared while the patient was under observation.

11. *Hecker on Syphilis in Pregnancy and its Effects on the Offspring.*—In this paper, Professor von Hecker of Munich gives an account of 173 cases of childbirth in connection with syphilis (*Wiener Medizin. Blätter*, 1881, No. 37). The cases are divided into four groups. The first includes cases, 81 in number, in which the mother at the time of her confinement was suffering from active syphilis which had not been treated. Broad condylomata about the anus and on the labia, or ulcers of the fossa navicularis, were usually present, but general signs of syphilis were very rarely found. Of these children, 46 were born at term; 35 were premature or still-born; 46 children were free from signs of syphilis at birth, and remained so during their stay in the lying-in hospital. On the other hand, 25 children were born in a macerated condition, without any syphilitic lesions of the internal organs. The placenta, however, was frequently increased in weight. In seven cases the children showed specific lesions, such as pemphigus, or syphiloma of the internal organs; while in three, death was ascribed to non-syphilitic causes.—Group 2 comprises cases in which the mother's syphilis had been treated, usually in hospital, for a shorter or longer period. In the 32 cases of this kind, a similar effect was produced on the offspring as in group 1; 14 children were born at term, and 18 prematurely; 11 were quite healthy; 9 dead and rotten; 4 bore signs of syphilis; and 8 were weakly, but not specifically diseased.—Group 3 contains 7 cases of old syphilis; 2 of the children were born healthy; 4 with signs of syphilis; and 1 was in a weakly condition.—Group 4 consists of 53 cases in which, in spite of the most careful examination, no trace of syphilis was dis-

covered in the mother. Consequently, in the opinion of the author, the children derived syphilis from the fathers. The 53 births produced 55 children (two being cases of twins). The foetuses only reached maturity in very rare instances, and the majority were much below the normal weight. Thus, 23 weighed between 4 and 5 pounds, and 48 between 3 and 6 pounds. Only two were born in a state of maceration. But 18 were born dead; 12 died within twelve hours after birth; and 16 during the eleven following days, leaving only 9 who survived. Pemphigus was noticed 41 times, and in most cases was present at birth. Affections of the lungs were observed in 31 cases, under the form of white lobular pneumonia in 18, and of syphiloma in 14. Abscess of the thymus was noted 16 times; and syphilitic disease of the liver 14 times, always in the form described by von Bärensprung. In 12 cases there was induration of the pancreas, which was considerably enlarged, and of cartilaginous hardness. Section of the organ was difficult, and was attended by a grating sound, similar to that produced in cutting through scirrhus. The spleen was enlarged in 10 cases; the suprarenal bodies were indurated in 8; the brain was affected in 3; and peritonitis was found in 3 cases. These facts support the author's opinion that, in most cases of inherited syphilis of the internal organs, the father is the source of the disease.

13. *Broadbent on Syphilitic Paralysis of the Facial, Spinal Accessory, and Hypoglossal Nerves.*—At a recent meeting of the Medical Society of London, Dr. Broadbent showed a woman suffering from paralysis of the nerves above mentioned (*Lancet*, Nov. 5, 1881). Six months previously the patient, who had a syphilitic history, suffered from severe pain in the head soon followed by paralysis of the right side of the face and deafness in the right ear. Three weeks later she had difficulty in swallowing, and regurgitation of fluids through the nose; later still, the tongue was affected, and the right half became atrophied. The soft palate was paralysed, and the sterno-mastoid and trapezius muscles were paralysed and atrophied. When brought before the Society, the woman was quite deaf in the right ear, and the right half of the face was completely paralysed; the affection of the occipito-frontalis and corrugator supercilii, of the orbicularis oculi, and of the muscles of the ala nasi, showing that the facial nerve or its nucleus was the seat of the lesion, and not the fibres connecting the nucleus with the higher centres. There was no impairment of sensation. She swallowed well, but the voice was husky, and the right vocal cord was completely paralysed. The scapula and outer end of the clavicle were drawn up by the levator anguli scapulae. Dr. Broadbent remarked that such a combination of paralyses had not hitherto been recorded. He considered that the disease was almost certainly situated close to the surface of the medulla oblongata, and that it was probably syphilitic.

14. *Debel on the Communication of Syphilis by Skin Grafting.*—The following case was reported to the Société Médicale des Hôpitaux by M. Féréol for M. Debel of Montbeliard (*Progrès Méd.*, 1881, No. 46, and *Gaz. des Hôp.*, No. 127.) A man, aged 49, had an attack of gangrenous erysipelas, which left a large ulcerated surface on the thigh. In order to hasten cicatrization, M. Debel applied forty-five skin-grafts, taken from several different persons, to the outer portion of the ulcer. Some days later, other portions of skin were grafted on the inner

half of the ulcer. Cicatrisation was proceeding when, twenty-nine days after the first, and sixteen after the second grafting, an ulcer of the size of a franc piece, with a greyish-white surface, appeared on the outer part of the surface; other ulcers followed, and soon extended over the whole of the cicatrix. Ten weeks after the first grafts had been applied, roseola appeared, and was followed by mucous patches in the mouth, and other signs of syphilis. M. Debel then ascertained that the patient's son, from whom some of the grafts were taken on both occasions, was suffering from syphilis. Cicatrisation of the ulcerated surface took place eventually under specific treatment.

15. *Downes on Six Cases of Syphilitic Necrosis of the Jaw, etc.*—Mr. E. Downes reports (*Lancet*, Nov. 19, 1881) six cases of disease of the lower jaw which were under his care in the hospital at Kashmir; his chief object being to recommend removal of the dead bone by an incision inside the mouth instead of externally. In none of the six cases is the patient's previous history, as regards syphilis, given, nor the period after contagion at which necrosis occurred, mentioned. The author remarks that Kashmir is a country whose inhabitants have all, or nearly all, become syphilised; and that, no antidote being as a rule taken, the worst forms of tertiary disease are very often seen. Diseases of the bones are frequently met with, and the lower jaw is not uncommonly affected. Mr. Downes has once removed the whole jaw, and five times one or other half of the bone, without any fatal result.

ARTHUR COOPER.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. SMITH, ANDREW H.—Neuroses of the Throat. (*Arch. of Laryngol.*, vol. ii, No. 4.)

2. HAYES, RICHARD A.—On the Action of the Posterior Crico-Arytenoid Muscles. (*Dublin Jour. of Med. Science*, March 1881.)

3. STÖRK.—The Examination of the Œsophagus with the Laryngeal Mirror. (*Wien. Med. Woch.*, 1881, and *Med. Chir. Rundschau*.)

4. MACKENZIE, M.—On the Use of the Œsophagoscope in Disease of the Gullet. (*Med. Times and Gaz.*, July 16, 1881.)

5. LEWENBERG, B.—Contribution to the Treatment of Simple Chronic Coryza. (*L'Union Méd.*, July 28, 1881.)

1. *Smith on Neuroses of the Throat.*—The author (*Archives of Laryn.*, vol. ii, No. 4) alludes first to neuralgia of the throat, an aching pain at no time very distressing, but aggravated under special circumstances, with no objective symptom beyond a slight degree of venous congestion. These cases are not amenable to antiepileptic remedies, but yield readily to quinine, arsenic, or iron internally. Sometimes, however, a combination of the two methods is required. Under the head of deceptive sensations in the throat, the author describes a case in which, although careful examination showed nothing abnormal, the patient complained of a sense of fulness in the throat, and of something pressing backward and lessening the space in the pharynx; also a sensation of something pulling up in the throat towards the ear. The author explains the case, by supposing that there was a slight paresis of some of the muscles of the throat, leaving others

without sufficient antagonism. The group of muscles, which he thinks affected in this case, consists of those which draw the hyoid bone forwards, viz., the mylo-hyoid, the genio-hyo-glossus, the genio-hyoid, and the anterior belly of the digastric, all of which, with the exception of the genio-hyo-glossus, are supplied by branches of the fifth nerve. The antagonising muscles, viz., the stylo-glossus, stylo-hyoid, middle and inferior constrictors, and the posterior belly of the digastric are, with the exception of the first-named muscle, supplied by the facial and glosso-pharyngeal. When the paresis is of reflex origin, the cause may be carious teeth, hypertrophied tonsils, chronic naso-pharyngeal catarrh, irritation in the ear, etc. If the cause elude search, the case should be treated as a neurosis on general principles. The internal administration of strychnia and tonics, and the application of the faradic current to the floor of the mouth, sufficed in the present case to give complete relief. Tickling in the throat the author has found a very annoying and persistent symptom in the early stage of phthisis.

2. *Hayes on the Action of the Posterior Crico-Arytenoid Muscles.*—Dr. R. A. Hayes (*Dublin Jour. of Med. Science*, March 1881) relates an interesting case of malignant disease of the larynx, in which at first the larynx showed nothing abnormal beyond slight catarrh. Subsequently, on April 15th, during inspiration, the anterior two-thirds of the cords did not separate, while the arytenoid cartilages moved widely apart posteriorly, leaving a triangular opening. On May 6th, the glottis no longer showed the triangular opening during deep inspiration; but the condition was that present in ordinary cases of complete paralysis of both abductors. The author concludes that in this case the internal parts of the posterior crico-arytenoid muscles (*i.e.*, the parts which rotate the vocal processes outwards) were first paralysed, probably through inflammation, or perhaps destruction of their substance, and that afterwards the outer parts of the posterior crico-arytenoids, which draw the arytenoid cartilages apart at their bases, also became injured and inactive. The author considers that this case furnishes conclusive evidence of the true nature of the action of the posterior crico-arytenoid muscles, as proved by the destruction of the function first of one and subsequently of the other portion of these muscles. He even regards the universally recognised outward rotatory action of these muscles as occupying a secondary position, and considers the outward drawing of the arytenoid cartilages as the usual and ordinary function of the abductors. The outer portions may, according to the author, be regarded as muscles of ordinary inspiration; the inner parts, on the other hand, as muscles of extraordinary inspiration. The author defines the action of the posterior crico-arytenoid muscles as follows. Firstly, there is a limited, but still distinct drawing of the arytenoid cartilages laterally outwards from the middle line; and, secondly, the arytenoids, being held in that position, are outward rotators of the vocal processes, in order that the glottis may be fully dilated.

3. *Störk on the Examination of the Œsophagus with the Laryngoscope.*—Professor Störk's Œsophagoscope (*Wiener Med. Woch.*, 1881, No. 8) consists of a jointed metal tube, covered with India-rubber, with a laryngeal mirror attached to its upper end. In order to facilitate its introduction, the instrument is provided with a pilot, consisting of an India-rubber tube terminating in a bag, which is passed through the instrument, and filled with air. As soon as the instrument has passed the thyroid cartilage

the air is allowed to escape from the pilot, which is then rapidly removed.

4. *Mackenzie on the Use of the Œsophagoscope.*—The author's Œsophagoscope (*Med. Times and Gaz.*, July 16, 1881) is a skeleton speculum, which only assumes a tubular shape after introduction, by flexion of the instrument on the handle. To the upper end of the speculum is attached a laryngeal mirror. In fifty cases in which it was tried, the author succeeded in using it thirty-seven times. He relates three cases in which the instrument was of service in treatment. In the first, the author saw a ragged projecting growth in the gullet, about three inches below the cricoid cartilage, and removed a piece about the size of a cherry, which, on examination, was found to be of epitheliomatous character. The patient lived six months after the operation, which the author considers to have prolonged life for four or five months. Case 2 presented an oval semi-transparent polypus, about the size of a white currant, on the right side of the gullet, one inch below the cricoid cartilage. Complete recovery from the dysphagia ensued on removal of the growth. In Case 3 a flat lamella of bone, about four millimètres square, was seen about two inches below the cricoid cartilage, on the anterior wall of the Œsophagus. It was removed with forceps, and complete recovery resulted.

5. *Læwenberg on the Treatment of Chronic Coryza.*—Dr. Læwenberg (*L'Union Méd.*, July 28, 1881) finding the remedies in ordinary use insufficient for the treatment of chronic nasal catarrh with thickening of the mucous membrane, recommends destruction of the hypertrophied tissues by the galvano-cautery. He employs a cautery point in which the incandescent portion is situate on the side, instead of the end, of the instrument. By this means cauterisation of the septum, which the author strongly warns against, can be easily avoided, even in cauterising the mucous membrane over the inferior turbinal bone in cases in which there is a conical prominence on the septum opposite this point. The author has never met with any accident after this method of treatment, and considers that when, in the practice of others, reaction has ensued, it must have happened either that the septum was touched with the cautery, or that the parts were too deeply burnt. The same cautery point is also recommended by the author for the treatment of enlarged tonsils, when it is desired to avoid cutting instruments.

E. CRESSWELL BABER, M.B.

PSYCHIATRY.

RECENT PAPERS.

1. QUINQUAUD.—Extreme Senile Atrophy of the Brain, Hypotrophic Dementia. (*La France Méd.*, Oct. 11, 1881.)

2. FÜRSTNER and ZACHER.—A Peculiar Malformation of the Cerebrum, with Secondary Disease. (*Berl. Klin. Woch.*, No. 26, 1881.)

3. MARANDON DE MONTYEL, E.—Contribution to the Study of *Folie à deux*. (*Annales Méd.-Psychol.*, Jan. 1881.)

4. RÉGIS, E.—Some Practical Reflections concerning Forced Alimentation. (*Ibid.*)

5. CHRISTIAN, M. J.—General Paralysis occurring in an Imbecile. (*Ibid.*)

6. MABILLE.—General Paralysis Treated Successfully by Baths and Prolonged Suppuration. (*Ibid.*)

7. BAILLARGER.—Hallucinations of Sight in a Blind Man. (*Ibid.*)

8. DALLY and DELASIAUVE.—Moral and Social Responsibility. (*Ibid.*, Jan., March, and May 1881.)

9. CHARCOT.—Myxœdema in the Male. (*Gaz. des Hôp.*, Jan. 29, 1881.)

10. LUNIER.—Epileptics; the Means of Care and Treatment Applicable to them. (*Annales Méd.-Psychol.*, March 1881.)

11. DAGONET.—Consciousness and Mental Alienation. (*Ibid.*, May and July 1881.)

12. BAILLARGER.—Ambitious Delirium in Organic Affections of the Brain and Diseases of the Spinal Cord. (*Ibid.*, May 1881.)

13. LAILLER, A.—Note on the Employment of Meat Peptones in Alimentation of Sitophobic Patients. (*Ibid.*)

14. SAUZE, A.—The Increase of Paralytic Insanity and its Causes. (*Ibid.*, July 1881.)

15. LANGLOIS.—Curious Case of Doubled Personality. (*Ibid.*)

16. LASÈGUE.—Hysterical Patients; their Perversity and Falsehood. (*Ibid.*)

17. MABILLE, H.—Note on the Relation between Insanity and Intermittent Fever. (*Annales Méd.-Psychol.*, Sept. 1881.)

18. DESPINE.—Physiological Theory of Hallucination. (*Ibid.*, Nov. 1881.)

19. ROUSSEAU.—Contribution to the Study of the Incendiary Monomania. (*Ibid.*)

20. WINN, J. M.—Prophylaxis of Insanity. (*Four. of Psychol. Med.*, vol. vii, Part I.)

21. DAVEY, J. G.—Transference of Special Sense. (*Ibid.*)

22. BEARD, G. M.—The Asylums of Europe. (*Boston Med. and Surg. Jour.*, Dec. 23, 1880.)

23. ROUSSEAU.—On Intermittent Insanity. (Reprinted from *Bull. de la Soc. Méd. de l'Yonne*.)

24. DEECKE, THEODORE.—On some Changes of the Ganglion-Cells of the Grey Cortex of the Brain in Acute Delirium, and their Relation to those in Acute Insanity and in Dementia. (*Amer. Jour. of Insanity*, Jan. 1881.)

25. WORKMAN.—Narcolepsia. (*Ibid.*)

26. WALLACE.—The Causal Relation of Nerve-Stimulants to Insanity. (*Ibid.*)

1. *Quinquaud on 'Hypotrophic Dementia'.*—Dr. Quinquaud proposes (*La France Méd.*, Oct. 1881, p. 508) to designate by this name a number of cases of senile dementia, which he describes as being somewhat rapid in their course, and depending solely upon cerebral atrophy. He discusses at some length the differential diagnosis between this and some other forms of brain-disease; e.g., those due to hæmorrhage, softening, meningo-encephalitis, tumours, the cerebral manifestations, of interstitial nephritis, etc. 'Hypotrophic dementia' is a simple progressive dementia, without any attacks of a convulsive, paralytic, maniacal or melancholic nature; it is seen in old people, and remissions never occur. Six cases are mentioned, and the weights of the brains, as ascertained after death, are given. The ages of the patients varied from 72 to 81; the weight of the encephalon varied from 860 to 920 grammes (the normal weight at 75 years of age is, according to Wagner, 1247 grammes). All this loss of weight had taken place in the cerebrum; the cerebellum was, in every case, normal in weight, varying only between 136 and 141 grammes. In no case was there any trace of meningeal adhesions. The author ascribes this atrophy to changes in the quality and quantity of the solid constituents of the blood, but he does not explain why the same blood, which proves inadequate to supply the requirements of the cerebrum, apparently suffices to maintain the cerebellum in its normal condition. He also seems to overlook the fact that the blood itself must be regarded as a tissue in a condition of degeneration, if not of atrophy, and that the primary cause of the general degenera-

tion of the system must be sought further back, in a defective supply of nerve-force due to failing vital energy.

2. *Fürstner and Zacher on Malformation of the Cerebrum.*—In this paper, read before the South-west German Society of Neurologists and Alienists, the case of a man is described, who died at the age of 49 of acute general paralysis of the insane. After death, it was found that the left cerebral hemisphere was much smaller than the right, being much narrower; the left frontal convolutions, especially the third, were so atrophied and defective that the island of Reil was exposed to view. The patient had been left-handed, but had not presented any defect of speech, or other symptom which could have pointed to this obviously congenital malformation of the brain.

3. *Marandon de Montyel on 'Folie à deux'.*—In the January number of the *Ann. Méd.-Psychol.*, this author relates four examples of this affection. He recognises three distinct forms of '*Folie à deux*'.

1. '*Folie imposée*', in this form a lunatic imposes his false conceptions upon a being intellectually and morally weaker than himself; the person acted upon is of weak mental powers, an imbecile easily led away, and must not be regarded as lunatic. This sequence of events has been described by Lasègue and Falret. 2. '*Folie simultanée*', in which two hereditarily predisposed individuals contract, at the same time, the same false ideas, under certain conditions already noted by M. Emanuel Régis. 3. '*Folie communiquée*', in which one lunatic communicates his hallucinations and false conceptions to another with hereditary predisposition. In the last two forms, both co-delusionists are truly lunatic. Three conditions appear to be necessary to the production of the '*folie communiquée*'; viz., well-marked hereditary taint in the individual to whom the delusions are communicated; at all times, a common life and considerable intimacy between the two future co-delusionists; and a constant action of the mind of the lunatic upon that of his sane companion. It is remarkable that all cases of '*folie à deux*' are characterised by delusions of persecution.

4. *Régis on Forcible Alimentation.*—The following three questions are proposed and discussed (*Ann. Méd.-Psych.*, Jan. 1881). May not the washing out of the stomach with alkaline solutions or Vichy water, prove beneficial in certain cases of sitophobia which depend upon some morbid condition of the stomach? When alimentation by means of the œsophageal tube has to be continued for a long period, is it not advisable to mix with the nutriment administered a certain dose of peptones, and thus to insure the absorption of a sufficient quantity of albuminoid substances? In order to guard absolutely against introducing fluid into the air-passages, might not a tube be advantageously employed, capable of distending laterally in such a way as to completely occlude the canal in which it was situated? By the use of such a tube, immediate suffocation would ensue if it were introduced by mistake into the trachea, and the error would at once be perceived. [The first two suggestions are good, and may prove valuable in suitable cases. The third proposal seems unnecessary, as there are other signs by which the operator may always satisfy himself (as he should invariably do before commencing to inject fluid) that the tube has not entered the trachea, but is in its proper position. —*Rep.*]

8. *Dally, Delasiauve, and others, on the Responsibility of Criminals.*—A full report of the continued

discussion of the question of the responsibility or irresponsibility of criminals, led by MM. Dally and Delasiauve before the Société Médico-Psychologique, is contained in the *Annales Méd.-Psychol.*, for January, March, and May 1881. The question cannot, however, be yet considered as closed.

9. *Charcot on Myxœdema in the Male.*—According to Professor Charcot (*Gaz. des Hôp.*, Jan. 29, 1881) myxœdema, when it occurs in infancy, completely arrests both physical and intellectual development. The case of a lad, aged 19, but not looking more than four or five years old, is given as an instance of this disease. The face is large and flattened, the nose enlarged, the lips everted, the genital organs remain rudimentary, the teeth have fallen out, and there is general firm œdema. It is a question whether this should be regarded as a case of cretinism, or whether cretinism and myxœdema are closely allied conditions, the one dating from infancy and the other occurring in adult life.

10. *Lunier on Special Provision for Epileptics.*—In this paper (*Annales Méd.-Psychol.*, March, 1881), the establishment of special State institutions for the reception of epileptics is advocated. A number of statistics are given; and it is pointed out that there are many epileptics who are neither fit subjects for hospitals nor for lunatic asylums, but who require special care and treatment, and who would pay, or whose friends would pay, for their maintenance in a suitable institution, similar to those already in existence for the blind, deaf-mutes, etc.

12. *Baillarger on 'Délire Ambitieux' in Organic Disease of the Brain and Spinal Cord.*—In a paper full of interest (in the *Annales Méd.-Psychol.*, May 1881) Baillarger cites and relates numerous cases in which a condition of mental exaltation with grandiose delusions (exactly similar to that which is well known as characteristic of general paralysis of the insane) has supervened upon local organic lesions of the brain, e.g., softening, hæmorrhage, and injury. This mental condition has lasted often for many months, even over a year. The patient has then died, and yet after death no trace has been found, in the cerebral meninges or cortex, of that chronic periencephalitis, which is regarded as constantly underlying general paralysis of the insane. The explanation offered is that in general paralysis there are two distinct sets of symptoms: (1) the progressive paralytic dementia, which is sometimes seen to run its course without the accompaniment of the usual large delusions, and which is connected with well-defined lesions discoverable after death; and (2) the mental condition (*délire ambitieux*), of which the direct cause and mode of onset is unknown, but which, once commenced, has an independent existence and an evolution peculiar to itself. This particular mental condition of exaltation, characterised by constantly changing, absurd, incoherent delusions of grandeur, is most prone to arise in connection with progressive paralytic dementia; but it may also occur independently of it, in connection with various other cerebral lesions, and is not infrequent as an accompaniment of locomotor ataxy and other diseases of the spinal cord. While the progressive paralysis depending upon chronic periencephalitis is never entirely recovered from, though it may be temporarily arrested, the mental exaltation may, and often does, disappear completely, both in typical cases of general paralysis, and in the more exceptional cases now under consideration. This view of the subject affords a ready explanation of the hitherto very difficult question of

remissions in, or recoveries (?) from, general paralysis. It is not uncommon, in typically developed cases of this disease, to see the mental condition of exaltation, with the accompanying delusions, disappear entirely. At the same time, the paralytic symptoms frequently undergo considerable improvement; but in all cases where these have been well-marked, that is, if the periencephalitis has been definitely established, there remains some trace of paralysis, and a slight but distinct mental weakness. The patient is never the man he was before, and the return of the symptoms before the lapse of very many months may be almost certainly predicted.

17. *Mabille on Insanity in connection with Intermittent Fever*.—Two cases are related and discussed (*Ann. Méd.-Psychol.*, Sept. 1881). The author concludes that intermittent fever may be the direct cause of an attack of insanity, and may also materially influence its course for the worse, where it already exists. Mabille's own cases lead him to the belief that it is the poisoning of the blood by paludal miasm which is the real cause of the insanity, or of the change in its character. The cerebral anaemia to which the evil influence has previously been attributed was not observed by the author in his cases.

20. *Winn on the Prophylaxis of Insanity*.—In this paper (*Journ. of Psych. Med.*, vol. vii, Part I) the subject is only considered in relation to hereditary tendency. The author is specially concerned to prove 'that not only insanity, but every form of hereditary disease, may, by a conservation of morbid energy, give rise to insanity' in the offspring.

21. *Davey on 'Transference of Special Sense'*.—A case is described (*Jour. of Psychol. Med.*, vol. vii, Part I) in which it is alleged that the sense of sight has been transferred from the eyes to the fingers and the palm of the right hand. A woman, aged 40, said to be quite blind, gives more or less accurate descriptions of photographs and coloured cards placed in her hand. Many precautions have been adopted, and tests applied, with a view to detect any possible deception. Nothing appears to be contained in Dr. Davey's paper, however, which would contradict the supposition that the results observed are due to confederacy. The patient appears to have a daughter in constant attendance upon her, who is in close sympathy with her, and with whom she can carry on a very rapid and mysterious interchange of ideas by means of the sense of the touch.

22. *Beard on the Asylums of Europe*.—Under this very comprehensive title, is circulated a short paper read by Dr. G. M. Beard of New York, before the 'National Association for the Protection of the Insane.' The observations upon which the paper is based were made in the summer of 1880, when Dr. Beard visited only 'ten places where the insane are cared for' in the whole of Europe, and these not the largest or best known institutions. Dr. Beard's excuse for this is that 'Places like Gheel and Hanwell, and the West Riding asylums, have been so often described that it did not seem necessary to go to them.' His observations in this country seem to have been confined to a private asylum in Scotland, a public asylum in Scotland, one county asylum in England, and the house of a gentleman who kept one private patient. Notwithstanding the limited data which would thus appear to have been at Dr. Beard's command, we are not disposed to quarrel with his general conclusions. Some of these are as follows. In the methods of supervision, and in the general care of the insane in public and private asylums, Great Britain has been

easily first of all nations. Next to Great Britain comes Germany. Of the three British Isles, Scotland on the whole takes the lead. In the best asylums of Europe, the insane are treated much like children. This last idea is excellent; it has probably not previously been formulated in so many words, but it is acted upon rationally and instinctively. The author works out this comparison well, and shows that to the insane, as to children, as much liberty should be granted as is compatible with their safety and present and their future well-being. The insane must also, like children, be kept under moral government and made to feel, as far as is compatible with their mental condition, that they are in a measure responsible for their acts. Dr. Beard considers that 'the best asylums of Europe are not enormous or imposing buildings, but a series or collection of small or moderate-sized unimposing cottages or houses'; thus giving his support to the cottage system of asylum construction.

23. *Rousseau on Intermittent Insanity*.—In a paper, published in pamphlet form by Gallot, of Auxerre, Dr. Rousseau premises that there are three distinct stages in the evolution of an attack of insanity: 1. Premonitory symptoms, consisting in a vital lesion of the functions of organic life; 2. The aggravation of the last; 3. Superficial disturbances in the acts of animal life and relationship to surroundings, and eventually the delirium which completes the pathological process. This view appears to savour much of unnecessary hair-splitting, but the author founds his treatment upon it. He points out that, by successfully treating the premonitory physical disturbances, many attacks of recurrent insanity may be prevented or alleviated. He treats of these prodromal troubles under the several heads of circulation, digestion, insomnia, menstruation, sensation, etc. The alternation of attacks of insanity with various bodily diseases is discussed, and the relationship of insanity to intermittent fever and rheumatism is considered.

25. *Workman on Narcolepsy*.—In the *Amer. Jour. of Insanity* for January 1881, Dr. Workman recounts the case which was described under this name not long since by Dr. Gélinau in the *Gaz. des Hôp.* Dr. Workman does not consider the case unique, but as typical of a form of cerebral disorder already known to medical men; he says he can himself recall at least one case of the kind. Gélinau's case was that of a man, aged 38, who had been subject for about two years to sudden attacks of sleep. The patient would fall down asleep at any moment and while employed in the most various ways. The sleep-fits were always brought on by any mental emotion, either of a pleasant or painful nature. It is said that occasionally he had as many as two hundred attacks in the course of a day; each fit would last from one to five minutes. There was a history of a not very serious blow on the head about a year before the attacks commenced; this may or may not have had anything to do with their causation. The fits were certainly epileptic in their nature, but muscular spasm was entirely absent.

26. *Wallace on Intemperance as a Cause of Insanity*.—From a careful analysis of the histories of all cases admitted into the Texas State Lunatic Asylum during a period of five years, Dr. Wallace gives it as his opinion (*Amer. Jour. of Insan.*, Jan. 1881) that at least one third of the cases of insanity there occurring must be ascribed immediately or remotely to the abuse of nerve-stimulants, either by the patients themselves or by their ancestors.

C. S. W. COBBOLD, M.D.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. HUSEMANN.—On Antidotism. (*Archiv für die Pathol. und Pharmacol.*, and Schmidt's *Jahrbücher*, Jan. 1881.)
2. ROSSBACH.—On Antagonism. (*Archiv für die Ges. Physiol.*, Band xx.)
3. ROSSBACH.—On Tolerance of Poisons. (*Ibid.*, Band xxi.)
4. ROSSBACH.—The Detection of Toxic Alkaloids. (*Berl. Klin. Woch.*, Band xvi.)
5. VITALI.—Tests for Morphia, Codeia, and Atropia. (*L'Orosi*, 1881, p. 152; and *Chem. News*.)
6. FRIEDBERG, H.—On Death from Hanging. (*Virchow's Archiv*, Nov. 1878.)
7. WILKIE, DAVID.—*Post Mortem* Examinations of two Cases of Judicial Hanging. (*Indian Med. Gaz.*, Oct. 1, 1881.)
8. LESSER, A.—*Post Mortem* Appearances in Fifty Cases of Suicidal Hanging. (*Vierteljahr. für Gerichtl. Med.*, Band xxxv.)

1. *Husemann on Antidotism.* — Dr. Kobert (Schmidt's *Jahrb.*, Jan. 1881) gives a review of three memoirs of Husemann and others on this subject (*Arch. für Exper. Pathol. et Pharmacol.*, Band vi, p. 335; Band ix, p. 414; Band x, p. 101). The first of these, by Husemann in collaboration with Krüger, treats of the antagonism of chloral and strychnia. The following are the conclusions arrived at. 1. There is no reciprocal antagonism between strychnia and chloral (in the sense that the action of either poison is annihilated by the other). 2. When toxic doses of strychnia and chloral are given simultaneously, the action of the latter predominates, and the symptoms of depression are observed. 3. There is, however, an unilateral antagonism in this sense, that the animals (rabbits) poisoned with strychnia may be saved by a non-toxic quantity of chloral, but yet sufficient to induce profound sleep. A cure may be effected, even when five or six times the fatal dose of strychnia is given; but beyond this, death supervenes, though this is retarded. 4. Small hypnotic doses of chloral are insufficient to save an animal poisoned by a quantity of strychnia appreciably greater than the fatal dose. 5. Chloral, when employed in sufficient doses, has proved efficacious in the case of men poisoned by strychnia. It is preferable to other counter-poisons, as morphia, Indian hemp, and chloroform, some of which exert their action too tardily; and others, such as curare and potassium bromide, have the defect of leaving the patient conscious, and thus exposed to the moral tortures which assail him. 6. The favourable influence of chloral in acute strychninism cannot be explained by a direct action upon the parts of the central nervous system which the strychnia has placed in a state of exaggerated excitability. It may be attributed in great part to the lowering by the chloral of the activity of the parts which conduct the excitation to the spinal cord. It thus prevents the too frequent repetition of tetanic spasms, and diminishes the danger of death which they involve. In nearly every case, the duration and intensity of the attacks have been notably diminished. 7. In the treatment of strychnia poisoning by large doses of chloral, a considerable diminution of the frequency of the respiratory movements is constantly observed; on the

cessation of such attack, nevertheless the respiration is accelerated. There is thus a diminution of the normal temperature. 8. Death from chloral, either taken internally or subcutaneously injected, is almost always due to arrest of respiration. It is only when the chloral reaches the heart-muscle in sufficiently large quantities, that death results from cardiac paralysis. 9. In acute chloralism, asphyxia supervenes in part from the progressive diminution of the energy of the respiratory centre, partly from oedematous infiltration of the pulmonary parenchyma; and these lesions are always found more or less pronounced at the necropsy of rabbits poisoned by chloral. The slowing and feebleness of the cardiac contractions have only a secondary influence. 10. Strychnia cannot be employed as an antidote for chloral. It neither hinders the progressive paralysis of the respiratory centres, nor the production of pulmonary oedema. Rabbits poisoned with chloral, and to which strychnia was afterwards given in fatal or even in simply toxic quantity, died from diminution of the frequency of respiration, and the period was not abridged. The lesions found on *post mortem* examination were those produced by chloral. 11. In cold-blooded animals which have been chloralised, strychnia does not prevent enfeeblement of the heart, nor death from paralysis of that organ. 12. Strychnia does not modify the lowering of temperature constantly observed in acute chloralism. 13. Strychnia does not prevent the hæmaturia and albuminuria observed after subcutaneous injections of chloral. 14. Increase of temperature, and of the frequency of the respiratory movements, are favourable prognostics in chloral-poisoning. 15. The causticity of strong solutions of chloral, and the tolerance of some animals for the drug, have led experimenters into error in regarding strychnia as exercising a favourable influence in chloralism. 16. When in chloral poisoning reflex excitability is abolished, strychnia, even when employed in much larger than a fatal dose, cannot restore this excitability. 17. When strychnine and chloral are simultaneously administered, the heart always stops in diastole. In another research, Husemann has demonstrated the inefficaciousness of camphor, oil of cajeput, ammoniacum, and the principal excitants in poisoning by chloral. Atropine gives the best results, but it must be given in repeated doses. In another research, in collaboration with Fliescher and Wehr, the author has shown that chloral is as efficacious in poisoning by brucine and thebaine as in strychninism. He remarks that thebaine, not only convulses, but also greatly diminishes sensibility. Chloral acts counter to codeine and calabarine only when given in quantity one and a half times greater than the fatal dose. In poisoning by sal ammoniac, chloral is useful in moderating the convulsions, but it does not prevent death. The salts of barium and strontium, according to present observations, act as convulsant cerebral poisons. Böhm has observed in frogs a great analogy between the symptoms of intoxication by the salts of barium and those of poisoning by picrotoxine and conicine; but rabbits killed by barium chloride have no convulsions till shortly before death, and these are explicable by paralysis of the heart. Chloral, as might be expected, is powerless against barium and strontium; and the same applies to carbolic acid. Besides, it is known that the convulsions produced by this last agent are not of central origin. Husemann has sought to render chloral more efficacious in strychnia intoxication by combining it with some other antitetanic

medicament. In conjunction with Hessling, he has employed first a mixture of chloral and potassium bromide, which has been vaunted by Bivine. This mixture is less efficacious than chloral alone. The bromide alone does not prevent, but only retards the convulsions. Alcohol is not so efficacious as chloral. Since physostigmine is now met with in commerce in a state of purity, and free from convulsant calabarine, it has been demonstrated that it is eminently paralysing. Rabbits to which an otherwise fatal dose of strychnia is given do not succumb, if they be previously brought well under the influence of physostigmine. Husemann's researches may thus be summarised from a practical point of view. In strychnia-poisoning neither potassium bromide, nor physostigmine, nor alcohol, should be employed: chloral should be given unmixed with other medicaments.

2. *Rosbach on Antagonism.*—Rosbach (*Arch. für die Ges. Physiol.*, Band xxi, p. 1) replies to the attack made upon his conclusion by Heidenhain and Luchsinger, that there is no reciprocal antagonism of poisons, a conclusion which has received confirmation at the hands of Husemann, Mariné, and Nawroki. Rosbach, working in conjunction with Anrep, arrives at the following conclusions. 1. in the sudoriparous and salivary apparatus of animals (dogs) two parts are to be taken into account in considering the actions of poisons, such as atropine, pilocarpine, and physostigmine—the nervous apparatus and the cellulo-glandular portion; and these are in the same relation as the terminal motor apparatus and the contractile cells. 2. The nervous part of these glands is influenced by very small doses of the poisons: paralysed by atropine, excited by pilocarpine and digitaline; the cellulo-glandular portion remaining insensible to the same doses. Hence small doses of atropine diminish the salivary and sudoriparous secretions only by paralysis of the nervous apparatus, and it is by exciting this apparatus that pilocarpine and physostigmine increase those secretions. 3. In relatively larger doses, the cellulo-glandular, as well as the nervous, portion of the apparatus is affected by the poisons. Large quantities of atropine check the secretion of sweat and saliva by paralysing both those portions of the glands, whilst large quantities of pilocarpine and of physostigmine exaggerate it by simultaneous excitation of those same parts of the glands. 4. Atropine acts in the above-mentioned manner in much smaller doses than pilocarpine and physostigmine. In other words, the glandular portions are much more sensitive to atropine than to the two latter alkaloids. 5. Atropine surpasses in its action pilocarpine and physostigmine when given in corresponding doses. 6. If atropine be given on the one hand and pilocarpine on the other, either simultaneously or successively, the action of atropine always preponderates for corresponding doses of the other poison. 7. If atropine be given in small doses, so as to paralyse the nervous and leave intact the cellulo-glandular portions of the glands, the latter may be excited by large doses of pilocarpine or of physostigmine. The exaggerated secretion which results simulates a double physiological antagonism. 8. In no case does pilocarpine annihilate the action of atropine upon the pupil.

3. *Rosbach on Tolerance of Poisons.*—In another research, Rosbach (*Arch. für die Ges. Physiol.*, Band xxi, p. 213) has studied tolerance of poisons, and has arrived at the following conclusions. 1. Tolerance of poisons comes on very rapidly (except in

nervous and hysterical subjects), and it is thus that at the third or fourth cigar symptoms of tobacco-poisoning cease, and that the quantity of alcohol necessary to produce intoxication increases with use. When atropine is given to dogs daily, certain symptoms are observed at first which disappear in the course of a few days—such as hyperæsthesia of the skin, trembling of the body, etc. The animals then become as lively and vivacious as unpoisoned animals. 2. The organs of man and of animals become equally habituated to poisons, and in the same organism each organ behaves differently towards these. 3. There are organs which never become habituated to poisons, in the sense that they always behave towards them as at the beginning of the administration. It is thus that morphia, always administered in the same dose, induces sleep for weeks or months; that the smoker, consuming an uniform quantity of tobacco, feels, at the end of years, the same beneficial influence continued. It is the same with tea and coffee. Certain organs are influenced by the use of atropine after long usage as at the commencement—the pupil always dilates, the salivary secretion is diminished. It is precisely those organs which are most impressionable which are least influenced by habitual use of poisons. 4. Nevertheless those organs, by the prolonged use of a poison, remain influenced by it for a period of time which progressively diminishes; hence drunkards, and those addicted to morphine, experience the need of more and more frequent doses of alcohol or of morphia. 5. Another series of organs reacts differently towards the same poison, according as it is administered for the first time or after a lengthened interval. Thus atropine acts at first upon the heart by paralysing the vagus, whilst at a later period it paralyses the motor nerves and the muscles of that organ. 6. Again, there are organs which become habituated to certain poisons (tobacco, alcohol, morphia), so that after a certain time they present no functional derangement. 7. These propositions are not valid, except where the dose remains the same. When the dose is increased, however slowly, a time comes when the poison again exhibits its action. 8. In an organism accustomed to a certain dose of the poison, a much larger dose acts in the same manner as a small dose on an unhabituated organism. 9. In general, the symptoms of chronic poisoning are extended to more organs and functions than those of acute poisoning. Thus in chronic morphia-poisoning we observe restlessness, insomnia, hyperæsthesia, neuralgia, an exaggeration of reflex movements, anorexia, malaise, vomiting, palpitation, albuminuria, malnutrition; whilst in acute morphinism purely nervous symptoms alone are observed. 10. In man and animals, if the dose of the poison be not continually augmented, but be kept at medium quantity, this amount may be supported with impunity for the rest of life. The proof of this is, that thousands of persons arrive at an advanced age who have taken for long periods tobacco, alcohol, coffee, or opium. 11. If the use of the poison be broken off at the end of a relatively short time—weeks, months, or it may be, in exceptional cases, years—health is restored in the course of a few days. But if the cessation take place after a more considerable period of use of the poison, certain morbid phenomena are observed, such as trembling, acute delirium, intellectual feebleness, and lowness of spirits. If now the use of the poison be recommenced, these symptoms rapidly disappear. 12. There is an epoch at which repara-

tion of tissue is still possible, and one when this is no longer possible. In this last case, there is a notable change in the chemical composition of the substratum of the tissues; and this modification is appreciable by the microscope in certain organs, as, *e.g.*, the liver. 13. In order to explain the effects of chronic poisoning, we may say that the organs are not more impressionable to normal stimuli (carbonic acid, ferments), but only to the poison; failing this, the body is deprived of excitants, and a profound depression of most of the functions is produced. 14. The fact that certain organs end by being no longer impressionable to poisons, is comparable to the immunity which certain organisms enjoy towards certain organised poisons (those of infectious diseases) when once they have been the seat of their action.

4. *Rosbach on the Detection of Toxic Alkaloids.*—Finally, in another paper, Rosbach (*Berl. Klin. Woch.*, Band xvii, p. 36) experiments upon frogs with the view of determining the presence of alkaloids which are present in too minute quantity to be detected by chemical means. He also finds that infusoria are extremely susceptible to the presence of poisonous alkaloids, and he thinks that in this way exceedingly small traces of poison may be revealed.

5. *Vitali on Tests for Morphia, Codeine, and Atropine.*—Vitali has modified Tattersall's reaction for the above alkaloids as follows (*L'Orosi*, 1881, p. 152; see also *Chem. News*, 40, p. 126 and 41, p. 63). Morphia is dissolved in concentrated sulphuric acid, and the solution is treated with a little sodium arsenate and warmed, when a blueish violet colour, passing into a bright green, is developed. On the careful addition of water this last colour changes to rose, red, and, finally, blue; and by ammonia, in excess, again into green. When morphia in sulphuric acid is warmed with sodium sulphide, a flesh-red colour is developed, passing through violet to a dark green. Dissolved in sulphuric acid, sodium sulphide added, and then a two per cent. solution of potassium chloride in diluted sulphuric acid, morphia gives a colour, at first green, then violet-blue, which is changed into yellow by an excess of potassium chlorate. Codeine behaves in a manner exactly similar. If an atropine solution be treated in the same manner with a drop of the above chlorate solution, and the dish containing the mixture be tilted, intensely blue-green bands are observed, which dissolve in an excess of the liquid to a bright green liquid.

6. *Friedberg on Death from Hanging.*—The *post mortem* appearances met with after death from hanging have recently been elucidated by several contributions. Professor Hermann Friedberg (*Virchow's Archiv*, Nov, 1878) gives the details of the examination of the exhumed body of a man who had been buried twenty-eight weeks. The cause of death was suicidal hanging. The most important observation made was on the neck, in front of which was a depression, just above the larynx, running round the front of the neck towards the sides. This groove was $12\frac{1}{2}$ inches long, and .4 to .8 inch broad, and was narrower at the sides than in the middle. The clear grey firm skin inside the groove contrasted with the dirty brown and softer skin, on the other side of the sharp and uneven edges of the groove. Above and below the groove, blood was extravasated into the deeper structures of the neck. Immediately above the bifurcation of the right

common carotid artery, was an annular solution of continuity of the internal coat of the external carotid. The uneven edges of the wound of the internal coat were separated from one another .4 inch, and between them there was a thin layer of coagulated blood. Friedberg adds some valuable observations on the causation and significance of injury to the carotids in cases of hanging and strangulation, of which the following is a summary. In 1828, Amussat drew attention to a case of hanging in which the inner and middle coats of both carotids were cut through; and since then Devergie, Klotz, Mildner, von Faber, Simon, Kussmaul, Hofmann, Ogston, and Friedberg have published observations showing that the injury to the carotids is an exceedingly valuable sign of strangulation and of hanging. The carotid can be injured by the ligature, when the artery is sufficiently stretched and squeezed. The injury consists partly in a rupture of the inner or of the inner and middle coats of the carotid, partly in extravasation of blood from the vessels of the walls of the artery. Friedberg is of opinion that the stretching of the vessel has more to do with the injury than the squeezing; for, in cases investigated by Mildner, von Faber, Simon, and Kussmaul, the rupture of the arterial coats was situated at a spot distant from the mark of the ligature. The sudden congestion which occurs in the vessels above the ligature may have to do with the origin of the lesion; this congestion may be so great as to end in rupture, and extravasation of blood. In the previously published cases of hanging and strangulation in which the carotid was injured, it was the common carotid of one or both sides that was affected; whilst in this new case of Friedberg's the right external carotid was the one injured, the seat of ligature lying between the hyoid bone and larynx. Hence the supposition is advanced that the external carotid, lying in a but little sheltered position, is more frequently injured when the ligature lies between the larynx and hyoid bone, than appears from the literature of *post mortem* reports in cases of hanging and strangulation. The necessary stretching of the artery fixed by the ligature may be caused either by the drop suddenly increasing the pull on the ligature, caused by the body-weight, or by the movements of the body, in either strangulation or hanging, directed towards freeing the neck from the ligature. Since the ligature can cause death without producing any rupture of the inner or inner and middle coat of the carotid, *e.g.*, by forcing the root of the tongue into the pharyngeal opening, and thus causing suffocation, and as the ligature can also produce this rupture in the dead body, we are not justified, from merely finding the coats ruptured, in concluding that the ligature produced its effects during life. But the extravasation of blood into the walls of the carotid, or into the ruptured wound itself, cannot take place after death; and hence the extravasation of blood is a valuable sign that the action of the ligature has taken place during life. And it is so not only when the inner coat of the carotid is ruptured, but also when it is uninjured. This extravasation may be manifested in cases of hanging and strangulation as ecchymosis of the wall of the carotid in the form of red specks, either in the outer or beneath the inner coat. It may happen that the rupture of the continuity of the carotid coats in hanging or strangulation may take place after circulation has ceased. In such cases, no extravasation takes place into the walls of the carotid.

7. *Wilkie on the Post Mortem Appearances in Hanging.*—Mr. David Wilkie (*Indian Med. Gaz.*, Oct. 1, 1881, p. 275) gives his notes of *post mortem* examination in two cases of judicial hanging. The drop in each case was from about the middle of the neck to the knee. In the first case, that of a man aged 25, the only striking external appearances were a suspicion of lividity of the eyelids, lips, and cheeks over the canine fossæ, and the mark of the rope. The *post mortem* examination was made two hours after death. The mark of the rope extended across the front of the neck, from $3\frac{1}{2}$ inches below and behind the right mastoid process, across the crico-thyroid membrane to about $1\frac{1}{2}$ inch behind and above the left angle of the lower jaw—the side of the knot. The mark was of a dark colour, and both its upper and lower margins were irregular. It was deepest on the right side, where there was a considerable depression; whilst above and below this there was much soft swelling. This was met with on the left side only, below the seat of the ligature. There were some small abrasions in the region of the knot, and these were slightly bloody. No ecchymosis was met with beneath any part of the mark. The condition of the carotids is not stated. There was a good deal of extravasation among the deep muscles of the neck in front of the spine. The right heart was loose and empty; the left was massy, firm, and containing much blood. The brain was not hyperæmic. The lungs were pale. The follicles at the root of the tongue, the hexagons of the gastric mucous membrane, the beginning of the duodenum, the jejunum, and the upper part of the ileum exhibited congested patches, marked in some places also by minute extravasations. There were also numerous extravasations in the mucous membrane on the upper surface of the epiglottis, and on the inner and outer surfaces of the laryngeal cartilages. There was no congestion, however, of the trachea. The other case was that of a man of the same age. The *post mortem* examination took place eight hours after death. The mark of the rope was duller than the surrounding skin; but it was not yet parchmenty, and there was no subcutaneous ecchymosis. On the vertebral column, behind the œsophagus, there was a clotted extravasation of blood, two inches long, and one in breadth. The heart was quite empty, and the lungs and spleen were not hyperæmic. The kidneys were dark and hyperæmic. There was no hyperæmia of either larynx or trachea. The condition of the carotids is not noted.

8. *Lesser on Post Mortem Appearance in Suicidal Hanging.*—Dr. Adolph Lesser (*Vierteljah. für Gerichtl. Med.*, Band xxxv, p. 201) has collected and tabulated the *post mortem* appearances met with in fifty cases of suicidal hanging. His classification is as follows: 1. Cases with lesion of the skin only, three cases. In all three there was a double mark, and the skin of the neck was anæmic (pale red in one case). The bottom of the furrow beneath the ligature exhibited, in places, effusion, or was strongly hyperæmic. 2. Cases with lesions of the skin and of the deeper lying soft parts, one case. Besides the appearances met with in Series 1, there were punctiform and streaky extravasations of blood in and beneath the left sterno-hyoid muscle. 3. Cases with lesions of the deeper lying soft structures alone, five cases. In one, there was extravasation into the platysma myoides; and in two cases there were extravasations on the perichondrium of the thyroid cartilage, and upon the thyro-hyoid ligament. In one case there was an extravasation of blood in the

region of the intact right upper thyroid horn; and in another case, numerous milary hæmorrhagic spots in the mucous membrane covering the cricoid cartilage. 4. Cases with lesions of the skin and of the hyoid bone, larynx, or of the vertebral column, three cases. 5. Cases with lesion of the skin, of the deeper lying soft parts, and of the hyoid bone, or of the larynx, one case. 6. Cases with lesions of the deeper lying soft parts, and of the hyoid bone, or of the larynx, twelve cases. 7. Cases with lesions of hyoid bone, and of this and of the larynx alone, six cases. In the fifty cases there was observed a lesion of the left common carotid in two cases, and of the right in two cases also; in two cases there were lesions of both common carotids; and in one case there was a lesion in the right external maxillary artery. The number and the severity of the lesions met with did not stand in any constant relation to the thickness of the ligature, nor to the force employed; but was much dependent upon the position of the body, sitting, kneeling, etc.

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REVIEWS.

Chemical Notes and Equations for the Use of Students. By MILNE MURRAY, M.A., M.B. Edin., M.R.C.P.E. Second edition. Baillière, Tindall, and Cox. 1881.

THIS is an useful collection of definitions, principles and facts, such as might be made by a student in the form of notes taken during a series of lectures on elementary chemistry.

For the most part the facts are unquestionable, and the principles sound, whilst the definitions are couched in terms remarkably terse, comprehensive and lucid; but the work is not entirely faultless.

It is very strange, for instance, that such an error as the following should have passed into a second edition. Immediately after the enunciation of the law of Avogadro, that 'equal volumes of all gases contain the same number of molecules if measured at the same temperature and pressure,' it is gravely asserted, as an explanation of the more rapid diffusion of light gases, that these are composed of *smaller* molecules, which can pass more readily through a porous septum than the heavier and larger molecules'; whereas it is an obvious corollary from Avogadro's law that the molecules of all gases are of *equal size* under similar conditions of temperature and pressure. The true explanation of the more rapid diffusion of lighter gases is, probably, that their lighter, but equally large, molecules move more rapidly and freely amongst one another, so that a greater number of them will impinge upon the porous septum in a given time.

If we accept the hypothesis that the lighter gases have larger 'intermolecular areas' than the heavier ones, so that a number of small molecules is contained in a certain volume of the lighter gas, equal to that contained in an equal volume of the heavier one, we shall introduce great confusion of ideas. For example, suppose equal volumes of hydrogen and oxygen to be allowed to mingle together by diffusion under the pressure of the atmosphere, say in a glass vessel over water or mercury. The volume of the mixture will be exactly double that of each of

the constituent gases. Now, as there has been neither contraction nor expansion of volume during the mixture, the total 'intermolecular area' in the mixed gases must be unaltered. But, since by diffusion the gases have become thoroughly incorporated, it is impossible to conceive of the molecules of hydrogen and of oxygen existing separately in the mixture at all; how then can these molecules be separated by intermolecular areas?

In consequence of this error in reasoning, the attempt to explain *contraction of volume* or condensation during the combination of gases, upon the hypothesis that the molecules of the compound gases are larger than those of their constituents, and their 'intermolecular areas' smaller, also breaks down.

The theory of multiple atomicities is adopted by the author. He thinks it probable that the same element may combine with different numbers of atoms of hydrogen, or other monad element, at different times, and under varying circumstances. Yet is the atomicity of iodine fixed at I, though there can be no doubt that iodine is in many of its combinations triad, as, *e.g.*, in trichloride of iodine = ICl_3 .

The method of grouping the elements adopted by the author, though it has advantages of its own, appears to us hardly so scientific as that which arranges them according to their atomicities.

In comparing the alkaline and alkaline earth metals, it would have been interesting to have added the inverse solubility of their *bicarbonates*, the bicarbonates of alkalis being *less* soluble than their carbonates, whilst the bicarbonates of the alkaline earth metals are *more* soluble than their carbonates. On the whole, the book fulfils the avowed intention of the author. G. STILLINGFLEET JOHNSON.

Lectures upon Diseases of the Rectum, and the Surgery of the Lower Bowel. By W. H. VAN BUREN, M.D., LL.D. London: H. K. Lewis. 1881.

THIS edition of Dr. Van Buren's book has been largely re-written and increased in bulk by the insertion of foot-notes, detailing illustrative cases. The lectures are twelve in number, two of which are devoted to benign stricture of the rectum. It will be seen that the present edition fully recognises syphilis as a considerable factor in the causation of the malady. As a curative measure, linear rectotomy is thought well of, and the author states that the same is sometimes unwittingly performed in dividing co-existing fistulae. The fifth lecture deals with the important subject of abscess. The division into marginal, ischio-rectal, and those in the superior pelvi-rectal space, is adopted. The subject is treated in an instructive and practical manner. Prolapsus ani is exhaustively considered, and here will be found in detail the author's method of applying the actual cautery in vertical stripes to the mucous membrane of the gut. The length of each line is about three inches. This plan is thought to be 'applicable to every stage of prolapse amenable to cure by local means'. With regard to operative measures for internal hæmorrhoids, Dr. Van Buren evidently favours the ligature; but he states that the clamp and cautery are often of the greatest value. For fistula in ano, it is mentioned that many cases may be cured without an operation, by securing free drainage in the manner recommended by Allingham in his last edition. The elastic ligature as a remedial means is not very fully discussed, although its effi-

cacy is admitted. The thermo-cautery is also mentioned as being applicable to very deep fistulae. The advisability of excising part of the rectum for carcinoma is discussed in an unprejudicial manner. Nine cases of the author's have given average results; in some, a prolonged respite was gained. For colotomy, the inguinal region is preferred to the lumbar for many reasons enumerated. Throughout the book, the author urges the importance of anæsthetics for enabling a thorough examination of the rectum to be made. The volume contains, also, many hints and thoughtful original matter, which make it a valuable addition to the existing literature on rectal complaints.

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NEW INVENTIONS.

A NEW CLINICAL THERMOGRAPH.

This instrument, of which an engraving is given below (Fig. 1), is the invention of Mr. Bowkett, Medical Officer of the Leeds Fever Hospital, who has bestowed much time and labour on its perfection, ably assisted latterly by Messrs. Salt and Son of Birmingham, in whose hands it is now placed.



SALT & SON
BIRM.

The principle involved in its construction is that of applying the pressure resulting from the expansion of a liquid in a closed chamber, under varying temperatures, for the purpose of recording these variations. The expansion produced in a given liquid by an increase of temperature is proportionate to that increase, and if its free expansion be restrained, the resulting pressure is also proportionate. The thermal portion of the instrument consists of a metallic vessel, rigid and unyielding, about three inches in diameter, and one-third of an inch in thickness. In connection with this is a curved hollow tube or spring (seen towards the outer edge of the engraving), much smaller in size, but similar to that used in the Bourdon steam-gauge. One end of this tube is fixed to the vessel, with the chamber of which it communicates; the other extremity is closed, and is in connection with a simple lever movement, increasing a first motion some three or four times. The whole is filled with liquid and hermetically sealed. Now any increase of temperature causes the contained liquid to expand. The vessel

being unyielding, the expansive force influences the tube only, whose form renders it elastic, in such a manner as to cause the end in connection with the lever to recede from the position of rest, and the lever is thus moved upon the recording surface. The recording surface consists of a dial or disc of card-board, set in motion by watch-work occupying the centre of the instrument. The dial makes one revolution in twenty-four hours, and is divided by concentric circles into degrees of temperature, and by twenty-four radial lines into spaces representing as many hours. The movement of the lever is from the centre towards the circumference; its extremity is armed with an arrangement for marking a legible ink line on the disc upon which it lightly bears, so that during its revolution a line is drawn whose position, in reference to the concentric circles, marks the temperatures, and in reference to the radial lines the times of those temperatures. The lever permits of being lifted to allow of the disc being changed. The flat under-surface is applied to the body, the other portions being protected from injury by a suitable vulcanite case. (Fig. 2.)



It is usually applied to the abdomen, being held *in situ* by a broad band of non-conducting material, which also serves to protect the instrument and the skin from being unduly influenced by external temperature variations. Being filled with a comparatively incompressible liquid, it is not to an appreciable extent affected by barometrical changes. Worn in the manner described, it produces but trifling discomfort, and requires no constraint of position or movement. A fac-simile is here given (Fig. 3) of a continuous record from a case of phthisis.

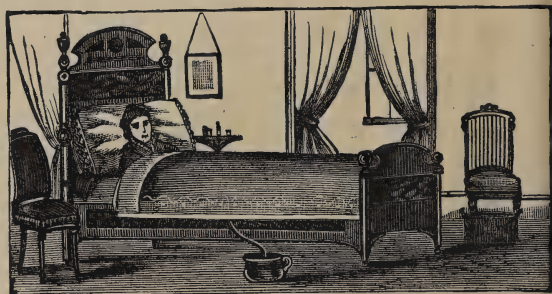


The abdomen is selected for its application, on account of the ease with which it may be there worn. Necessarily, the closure of the axilla for twenty-four hours would be fraught with extreme discomfort, even in health, while in many cases of sickness, such constraint would be unbearable. The record given by the abdomen, while not always absolutely agreeing with the axillary temperature, is yet sufficiently accurate for all practical purposes. If, however, for purposes of research, etc., perfectly accurate records be required, it will be essential, either that the instrument be worn in the axilla, or, if on the abdomen, that the hand be fastened over it, thus surrounding it by the tissues. The latter plan is by far the more comfortable. It may be repeated, however, that these precautions are only requisite where great exactness is desired, and that, for the detection of abnormal temperatures or abnormal variations, the simple application by the broad band is sufficient.

It will be seen that its construction admits of much variation of design in size and shape. The range usually given it is from 97 to 107 deg., but, by varying the liquid with which it is filled, or the relative capacity between the tube and the chamber, the size of the degrees and the resulting delicacy of range may be increased or decreased at pleasure.

NEW CATHETER.

Dr. Robert Battey of Rome, Georgia, U.S.A., has invented the instrument figured below, which he names Battey's Universal Siphon-Catheter. It is, as will be seen, nothing more than the soft rubber catheter of Nélaton, extended to a length of four feet, instead of fifteen inches.



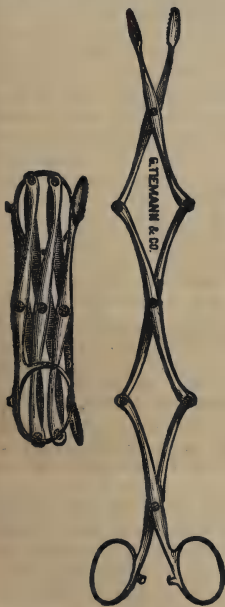
When introduced into the bladder, the patient being in a reclining position, it forms a new siphon, and conducts the urine into a receptacle upon the floor until the bladder is emptied. When the catheter is withdrawn, the moment its eye leaves the urethra, by reason of its siphon action (the weight of the column of urine still in the instrument), air enters, and the last remnant of urine passes safely into the receptacle, not a single drop falling upon the bedding or clothing of the patient. Dr. Battey points out that to every one who has experience in manipulating the female catheter and a receiving vessel, beneath the bed-covering, with all of its awkwardness and accidents, the advantages of the siphon action of the new instrument will be sufficiently manifest. In atonic state of the bladder, the siphon empties the viscus without need of assistance by either vesical contraction or external compression. The action of the siphon comes into useful play, also, in the readiness with which the interior of the instrument is cleansed. The operator, after

washing his hands, coils the catheter in the water to fill its channel with liquid, and, seizing the end firmly between the thumb and finger, acting as a pinch-cock, draws it over the edge of the basin. The siphon is thus established, and discharges the water from the basin into a receptacle below, rapidly and completely cleaning the instrument.

It is termed, also, an universal catheter, and in a sense it is such. It is equally available for the male and female, and, when of rather small size, is equally available, too, for adults and children, excepting, of course, very small children, who but rarely require catheterism. So soft and flexible is it, that it easily passes an enlarged prostate, or insinuates itself through a tortuous urethra where any other catheter can be made to go. The instrument is manufactured by Messrs. Sheppard and Dudley of New York.

NUNN'S FOLDING FORCEPS.

The folding forceps, of which the accompanying illustration will convey a good idea, is made upon the same principle as the well-known 'lazy tongs'; in other words, it is formed of a number of similar pieces which are pivoted together in pairs as are scissors. The proximal ends of the first pair are provided with finger-rings or hooks, like other forceps, the other ends being pivoted to the second pair, and these again to the third, and so on until the number wished is attained; the outer end of the last pair being provided with whatever blades are desired, scissors, forceps, or other. These end-blades can easily be changed, and thus one forceps be used for many purposes. By a catch and ratchet at the handle-end, they can be used as an artery-forceps, and for the other purposes to which locking-forceps are applied.



When fully extended, the length of this forceps is equal to the united lengths of its constituent pieces; but when folded to be put into a pocket-case, its length is that of one piece, and its breadth will equal the united thickness of the blades. Thus, assuming a forceps twelve inches long, of quarter-inch steel, to be made in four sections, such an instrument, when folded,

would occupy a space three inches long by one inch wide, and could be readily carried in an ordinary pocket-case.

Although originally designed to overcome the inconvenience of carrying a long uterine dressing-forceps, it will be seen that the principle is applicable to the whole class of two-bladed instruments, with the result of increasing their portability and diminishing their weight. This latter condition results from the fact that the distance between the power and the fulcrum, and between the fulcrum and the resistance, can be so greatly diminished that the blades can be made much lighter, and yet give a grip equally as unyielding as long single-jointed instruments made three or four times as heavy.

The original instrument was made for Dr. R. J. Nunn of Savannah, Georgia, U.S.A., by Messrs. Arnold and Son of London, and subsequently in an improved form by Messrs. Tiemann and Co. of New York.

MACKENZIE'S COMPOUND COD-LIVER OIL EMULSION.

This preparation is an emulsion of pale cod-liver oil, pepsine, and hypophosphite of lime. The various reconstituent qualities of the ingredients render it more efficacious than the oil taken alone, whilst they deprive it of those characteristics which render it unpleasant to some delicate stomachs. The oil used in the preparation of this emulsion has the specialty of being pale oil extracted from the selected livers of the Lofoden coast cod-fish, when in the healthiest condition and in the coldest season of the year. Dr. C. J. B. Williams strongly recommends pale oil as being more agreeable to the palate and of higher medicinal value than the brown oil. This cod-liver oil emulsion has now been at the service of the profession for some years, and its continued popularity testifies that the merits claimed for it by the makers, Messrs. Mackenzie and Co., 45 and 46, Forrest Road, Edinburgh, are recognised by the profession.

BJORKBORN'S EXTRACT OF MALT.

The Extract of Malt prepared by Oscar L. Björkborn of Gottenburg, Sweden, is worthy of consideration. Dr. Pietra Santa, writing in the *Journal d'Hygiène* of Paris, March 4th, 1880, says:—'The Malt Extract prepared by Oscar L. Björkborn of Gottenburg, takes indisputably the first place amongst malt extracts. It has also been found worthy of the prize medal at the Paris Exhibition of 1878. Since that time, I have used this remedy against chronic maladies of the lungs, the stomach, and the intestines, and my expectations of it have been fulfilled step by step.' Dr. Bouchut, the well-known therapist of Paris, also recommends this malt extract as a nutriment, and foresees for it a useful field of employment in chronic maladies where the animal economy requires to be fortified against the weakening effects of disease. Liebig thus describes its properties:—'Wealth of malt, sugar, perfect absence of all combustible and fermenting matter. Due proportions of phosphate and gluten, in a soluble and thoroughly digestible form. Fresh, pleasant taste.' The analysis given by Professor Aug. Almén is as follows:—

Albuminous matter, chiefly peptons	...	...	4.67
Maltos (corresponding with 37 proc. of grape sugar)	...	...	55.50
Dextrine	...	...	15.80
Insoluble ingredients (starch, etc.)	...	...	0.18
Ashes	...	...	1.42
Water	...	...	22.43
			100.00

The analysis shows this preparation to be a genuine malt extract, free from foreign addition and injurious matter, and it is considered by Professor Almén 'to be more than usually concentrated, which conduces to its durability and inalterability when kept'. It may be taken in milk, beer, or wine, or in its natural state. It is prepared in several forms. The sole agents for England are Messrs. Noble and Company, 3, Savage Gardens, Tower Hill, E.C.

MISCELLANY.

DEATHS FROM ETHER.—Dr. John B. Roberts (*New York Medical Record*, July 2, 1881) is inclined to think that the failure of respiration is not always the first sign of danger of death from ether, but that the heart may begin to fail seriously while respiration continues active. He thinks that the pulse ought to be watched more closely than it usually is, that in some cases the urine ought to be examined as well as the heart and lungs, and that the person who is entrusted with the ether administration should be the most skilful of all the assistants. Dr. Roberts has collected twenty cases of death from ether that have been reported since January 1872. There is great prejudice in the United States in favour of the harmlessness of ether that pains-taking researches of this kind are needed to overcome.

PAUL BERT ON ANÆSTHETICS.—In an important paper relating to the use of anæsthetics communicated to the Paris Academy of Sciences by M. Paul Bert, the new French Minister of Public Instruction, experiments are described in which dogs, mice, and sparrows were kept in chambers containing air along with various proportions of some anæsthetic. In a graduated series of such mixtures of increasing strength one is found just sufficient to cause insensibility, and proceeding higher a dose is reached which kills. The interval between these points (the anæsthetic dose and the fatal dose) M. Bert calls the working zone (*zone maniable*). He has sought to determine it for various agents—chloroform, ether, amylene, bromide of ethyl, chloride of ethyl—for the animals named, and has reached the singular result that in all these cases the fatal dose is precisely double the anæsthetic dose. Thus, *e.g.*, in the case of mice submitted to chloroform, 6 grammes of chloroform vapour in 100 litres of air cause insensibility and 12 grammes are fatal. When an animal is made to breathe, in the way indicated, a mixture about the middle of the working zone, it is very quickly anæsthetised and remains perfectly quiet during the whole experiment (two hours in some cases), not requiring any attention or concern; and the contrast in this respect to the ordinary methods by compress, sponge, etc., is striking. In the latter case, indeed (M. Bert points out), a patient alternately breathes, according to the quantity of chloroform in the compress, or its distance from mouth and nose, a mixture of air and chloroform either below the active dose, or within the working zone, or at or beyond the limit of safety; and a fatal result in the last instance is not always warded off by prompt removal of the compress. The working zone is often very narrow; in the case of chloroform, while 8 grammes in 100 litres does not suffice to render a dog insensible, 20 grammes kills it. Ether is much less dangerous, for between the active and the fatal doses of it there is an interval of 40 grammes. An anæsthetic acts, not by the quantity respired, but according to its proportion in the inspired air; hence, the statements of surgeons as to how much chloroform they put on the compress have little value. M. Bert recommends the use of a mask, communicating by a tube with a zinc reservoir holding 200 or 300 litres of the anæsthetic mixture. The pulse and the respiration need no attention. The most delicate matter would be the determination of the lower limiting dose. The author's experiments here give no guidance. The doses varied greatly for dog, mouse, and sparrow, always less for the mouse than for the dog. They were always greater for the sparrow than for the mouse; and in the case of chloroform and amylene they were about equal for the sparrow and the dog. Among other facts, it is stated that the mixture alters very little in strength, except in the first instance. Experimenters have sometimes been mistaken as to the fatal proportion of chloroform in air, through using potash to absorb carbonic acid; this substance rapidly decomposes chloroform. Once more, the working zone for protoxide of nitrogen is more extensive than for the substances specified; the ratio between the limiting doses being one to three.

HEADS AND HATS.—The subject of the alleged diminution in the size of men's heads during the past generation is one that has been attracting some attention recently, and the whole question is very fully discussed in *Nature* by several correspondents. Mr. F. F. Tuckett adduces the statements and figures of a number of well-known hatters to prove that within the last twenty-five years the average size of hats has decreased by one size; *i.e.*, by about $\frac{3}{8}$ inch in circumference. That this is the case with regard to hats there can be no doubt, but that the decrease is owing to a diminution in the size of the average head, it would be very difficult to prove. If we remember that men now cut their hair quite close to the head, and wear their hats on the top of their heads instead of down on their ears, the $\frac{3}{8}$ inch may easily be accounted for. Indeed, the weight of evidence is entirely against any such explanation as the hatters would like to make out, and Mr. Charles Roberts puts the case very clearly. Mr. Roberts, moreover, refers to several other points of serious interest to all civilised communities. 'The chief reason for the falling off in the dimensions of hats in the present day,' Mr. Roberts states, 'is the accession to the hat-wearing community of a very large number of small-headed persons, such as clerks and shopmen, who formerly did not wear hats at all; and, on the other hand, the defection of a large-headed class, the clergy, who have given up tall hats and taken to the use of soft felt ones. The only way hatters' measurements could be made available for anthropological purposes would be to examine the statistics of one class, say the professional, who have always worn hats, and then allow for the change of fashion in the hair and the position of the hat in the present day. If it be really the case that the heads of the present generation are smaller than those of the last, we must look for the cause, not in tight lacing, but in the diminished size or the deformity of the female pelvis, for it is this which is the gauge of the heads of the people. Male infants are longer, heavier, and have longer heads than females, and at the time of birth a greater destruction of males takes place in consequence. In Europe, the proportion of infants born alive is 105 males to 100 females; but if we include the still births, the proportion of the sexes is 150 males to 100 females, showing that there is a sad loss of some of the finest physical and probably mental products of our race by the mere mechanical difficulties at the time of birth. There can be no doubt that rickety conditions of town children and the sedentary or persistent standing occupations of young girls in shops, etc., will tend to distort the pelvis and thus act injuriously on the race by reducing both the physical and mental standard of their children. There can be no doubt that our large towns are, as it were, the graves of the physique of our race; but it is not because town life is so very injurious, but because the feeble, the halt, and the blind gravitate towards them in search of work suitable to their capacities. So far from admitting the degeneracy of our population as a whole, I am satisfied that it is improving in physique, and is better now than at any former period of our history. The skill and care which save the weak child to the community, give health and strength to the strong, and the physique of the whole is raised to a higher level. It is difficult to find direct evidence of this improvement, but some statistics of the stature and weight of factory children (where we might expect degeneracy, if anywhere) recorded in 1833 and 1873 show that the children of the latter period were a whole year in advance of the former—children of 10 or 11 years of age in 1873 being as tall and heavy as those of 11 and 12 forty years previously.' Mr. Tuckett gives some figures with regard to the sizes of hats worn by several eminent men which may interest the curious in these matters. Lord Chelmsford, $6\frac{1}{2}$ full; Dean Stanley, $6\frac{3}{4}$; Lord Beaconsfield, 7; the Prince of Wales, 7 full; Charles Dickens, $7\frac{1}{8}$; Lord Selborne, $7\frac{1}{8}$; John Bright, $7\frac{1}{8}$; Earl Russell, $7\frac{1}{4}$; Lord Macaulay, $7\frac{3}{8}$; Mr. Gladstone, $7\frac{3}{8}$; Mr. Thackeray, $7\frac{3}{8}$; Louis Philippe, $7\frac{3}{4}$; M. Julien, $7\frac{3}{4}$; Archbishop of York, 8 full. Whatever may be the case with regard to brains, it would scarcely seem from these figures that hats are a criterion of brain-power.

The London Medical Record.

RECKLINGHAUSEN ON THE METHOD OF FORMATION OF RANULA.

SOME writers, especially Virchow, have expressed the opinion that the contents of ranulae are secreted by the cyst-wall. In certain cases, this fact cannot be contradicted; principally when the wall has undergone pathological transformation in consequence of irritation. In mucous cysts, Professor Recklinghausen disputes this method of production. The wall of the cyst does not present cup-like cells, such as are found in the organs which secrete mucus; neither is any vitreous swelling of the protoplasm of the epithelial cells observed. Moreover, the cysts, whose walls secrete the contents, like the cysts of the gall-bladder, and of the vermiform appendix, are much smaller in relation to the normal volume of the dilated canal than mucous cysts are. The quantity of fluid secreted should be in proportion to the secreting surface; as a portion of an excretory canal has only a surface infinitely small in comparison to that of the glandular parenchyma, the fluid should certainly be formed almost exclusively in the gland at the outset of the retention. The cyst must therefore be formed by a process analogous to the dilatation of the ureter in hydro-nephrosis, and not to dropsy of the gall-bladder.

The physical properties of the mucus have a very important influence on the formation of ranula and of other mucous cysts. This substance has a great tendency to swell; it is extremely tenacious, and adheres a little to the walls of the canal. If we now suppose that the gland and its excretory ducts are normal, and that by some influence the secretion suddenly becomes more active, although the ducts are perfectly permeable; in this case, dilatations may be observed in their course, for the fluid secreted cannot flow with sufficient rapidity, and the mucus which flows away is less abundant than the mucus produced.

It is possible that these retentions of fluid already constitute a predisposition to chronic inflammation. Similar inflammations are somewhat frequent in muciparous glands; they affect especially the excretory ducts, and have the characteristics of interstitial inflammation. In a case observed by Professor von Recklinghausen, both of Blandin and Nuhn's glands showed anomalies; on the right side there were only dilatations of the excretory ducts, whilst on the left side there were found changes in them. Their epithelium was raised by an exudation and pushed towards the centre of the ducts; at certain points the epithelial surfaces touched, and thus produced a complete obliteration of the duct. In cases of this kind the exudation is hyaline; the whole pathological processes might, therefore, be designated, 'hyaline myxangitis'.

In addition to this form, a fibrous myxangitis is observed, in which the walls of the excretory ducts are exhausted in consequence of a new formation of connective tissue. In the latter form, the chronic inflammation is rather primary than secondary. This inflammation may determine the formation of a cyst; for this, it is enough that the proliferation of

the connective tissue succeeds in obliterating the excretory duct in some point of its course. The size of the cyst depends upon the position of the stricture.

The initial dilatation always occurs in the excretory ducts or their branches; their walls, are, in fact, more extensible than the glandular *cysts-de-sac*, because they are thinner and surrounded by loose connective tissue. In one of the cases observed by Professor von Recklinghausen, it is true that there was mucus in the glandular *cysts-de-sac*, but, in this case there was mucous degeneration of the parenchyma, a process which cannot originate a cyst. In fact, for the formation of the latter, it is necessary that there should exist glandular lobules capable of secreting, a condition which is absolutely wanting when the parenchyma itself of the gland is in a state of degeneration.

It now remains to discuss what is the method of formation of the wall of the cyst. There is certainly a disproportion between the quantity of preformed substance which constitutes the necessary excretory duct, and the quantity of tissue necessary for the formation of the wall of a cyst, sometimes a millimètre thick. In consideration of this fact, Professor von Recklinghausen admits that the wall of the cyst is constituted partly by the surrounding tissues, and partly by a new formation. The elastic fibres, the nerves, and the striated muscular fibres, which have been found in the walls of a ranula, may be considered as elements preformed and borrowed from the neighbouring tissues; these elements, in fact, are not often met with in inflammatory neoplasms. A large part of the connective tissue and of the epithelium may be considered as newly formed. At several points of the parietes there is found a connective tissue, which is soft, loose, rich in round and fusiform cells, and very vascular. The double layer of epithelial cells, and the masses formed of from six to eight of these cells, indicate in a clear manner that the epithelium is in process of proliferation.

According to Dr. von Recklinghausen, mucous cysts have an inflammatory origin; the primary cause of all the processes is myxangitis. The proofs that this chronic inflammation is the true cause of the obliteration of the excretory ducts, have been recognised with certainty in cysts of Bartholin's gland, and in the vibratile-celled cysts of the liver. As to ranula, the writer has not been able to find any trace of obliterated excretory ducts; he has never even observed cicatrices on the lower surface of the tongue. It might be supposed that the cyst is developed as the consequence of congenital imperforation of an excretory duct; but this is no more proved than the obliteration by chronic inflammation. In order to endeavour to throw a little light on this yet obscure point, Dr. von Recklinghausen has sought for the determining causes of the formation of cysts in glands of the same nature as that which gives rise to ranula.

Practical experience corroborates the conclusions drawn from former researches. Gynæcologists are unanimous in admitting that the cysts of Bartholin's gland are in genetic relation with the inflammation with which this gland is frequently attacked. Perihepatitis of the upper surface of the liver is very frequent, especially in females; it is caused by the mechanical action of the border of the ribs, and occupies precisely the same position as the vibratile-celled cysts of the liver. As to the development of ranula, clinical observation has not given any posi-

tive results. It has been alleged that this tumour is especially noted amongst smokers; others have thought that it occurs especially in epileptics, in consequence of the bites which they give their tongue during the fits. Cooper asserts that singers are frequently attacked with ranula. These assertions have no foundation; all that can be said is, that the point of the tongue is sufficiently exposed to mechanical, thermic, and chemical irritations, for the inflammation to be produced from which Dr. von Recklinghausen traces the derivation of ranula.

Those who allow that all tumours have specific germs, might believe that Blandin and Nuhn's gland is capable of containing such a germ, and that the individual may at his birth have a predisposition to ranula. In fact, this tumour is sometimes congenital, and occupies a position in which embryonic aberrations are often observed. Moreover, the vibratile cells of the wall of the ranula seem to afford an argument in favour of this idea. In the normal condition, the excretory ducts of Blandin and Nuhn's gland have not really epithelium with vibratile cilia; they have only an ordinary cylinder epithelium. It may be answered to these objections that, in certain cases, variations in the epithelium have been observed; they are frequently discovered in ovarian cysts (Friedländer). In one of the cysts of Bartholin's gland, already described, still more remarkable new formations have been found; that is to say, granulation-tissue containing papillæ and gland-tubes.

It has besides been demonstrated that, in the animal kingdom, as in man, in certain physiological and pathological conditions, the form of the epithelial cells situated at a given point may vary considerably. Dr. von Recklinghausen quotes several examples of these transformations; and he concludes that the form of these cells, being variable, can only serve to recognise the progress of the phenomena of development.

As a practical result emanating from his researches, Professor von Recklinghausen recommends especially a thorough extirpation of the cyst at the point of the tongue. It is here that the source of the evil must be sought for, and not below, as has hitherto been done. Excision of the cyst, and extirpation or cauterisation of Blandin and Nuhn's gland, will prevent any recurrence.

EBERTH AND LETZERICH ON THE TYPHOID BACILLUS.

EBERTH (Virchow's *Archiv*, Band lxxiii, p. 486) gives the results of the examination of seventeen cases of typhoid fever, with reference to the presence of bacilli. He compares these with eleven other cases of different infectious diseases, in which micrococci were found only exceptionally in the lymphatic glands, and no bacilli were present, and with thirteen cases of tuberculosis and phthisis, in which, in spite of the presence of extensive intestinal ulcers, no micro-organisms were found in the spleen or lymphatic glands. The ulceration of the intestine, here, as in typhoid fever, did not favour the entrance of micro-organisms. In six of the cases of typhoid, he found bacilli, generally in the glands, less often in the spleen; in eleven cases he found nothing. The average duration of the disease in the positive cases was rather longer than in previous observations. The number of bacilli was, on the whole, less; only in one early case (of fourteen days'

duration) was it very large. The bacilli agreed in all respects with the earlier descriptions, but were not so abundant as in Klebs' cases. In addition, there were, besides the ordinary form, some long broad threads, perhaps only another phase of development.

Letzerich (*Arch. für Exp. Path.*, Band xiv, Heft 3), having observed that the hypostatic sputa of typhoid patients contained the typhoid bacillus in great quantity, cultivated it with care in isinglass jelly. He found that rabbits, infected with this material by hypodermic injection, sickened and died in about seven days. Dissection showed injection and swelling of the mucous membrane of the small intestine and Peyer's patches; the spleen was enlarged. In another earlier series of experiments, in which the washed micro-organisms from typhoid stools were employed, he found atrophy of the spleen. He explains, by the longer duration of those cases, atrophy succeeding to the primary state of enlargement; and he refers to the case of a rabbit placed by his children in the hutch he had used for these experiments, and which sickened and died in seven or eight weeks; on section, it showed atrophy of the spleen and numerous atrophic patches in the intestinal mucous membrane, with no Peyer's patches, but, in their place, thin transparent areas surrounded by a slightly thickened and pigmented edge. These experiments show that the typhoid poison may be introduced by other ways than the alimentary canal, and that the bacilli have the power of entering the blood-vessels and being transported with the blood-current. They leave the blood again, and pass into the tissues, either directly by diapedesis, or enter white corpuscles, which act as their carriers through the walls. Microscopical examination of the tissues of these animals showed the tissues, especially Peyer's patches, infiltrated with fungoid growth in zöoglæa-masses of a pale yellow colour, probably derived from the colouring matter of the blood. Some of the spore-cells give rise to bacilli by endogenous division, which form networks for the most part, but some become enlarged at each end, so as to assume a dumb-bell form. This infiltration leads to necrosis of the tissues. In the spleen, similar micrococci and bacilli, forming colonies, are found in the interstitial spaces, under the capsule, and between the elements of the organ. The small veins are often blocked by the growth, causing capillary hæmorrhages. In the lungs, there are inflammatory foci formed by the accumulation of lymphoid cells in the alveoli, between which are micrococci and spore-cells. The veins are often obstructed by fungoid growth. In a postscript he adds that, after seeing Klebs' description of a fine thread-like form of the micro-organism, he looked over his preparations carefully, and found it present in those follicles in which the process had not reached a high degree. These researches fully identify his earlier described 'micrococcus typhi abdominalis', with the 'bacillus typhosus' of Klebs.

ROBERT SAUNDEY, M.D.

RINDFLEISCH ON TUBERCULOSIS.

AFTER all that has been said and written on this subject, we seem little nearer unity than we were some years ago. Does the reason of this lie in the attempted dissociation of clinical medicine and pathology? The results of such a dissociation are seen in the cognate surgical subject of tumours,

where clinical history is at least as important as ultimate histological structure. The pathology of tuberculosis must similarly consist, not merely in a histological examination of its ultimate products, but also in the careful tracing of its clinical history.

Tuberculosis, Professor Rindfleisch believes (Virchow's *Archiv*, 1881, Band lxxv, pp. 71-83), is undoubtedly an 'infection-disease', but one for which mankind has, to a certain extent, established a tolerance, and which, therefore, appears in its original character only in the case of a person where this tolerance does not exist. Immunity from the outward manifestations of this latently universal disease depends, according to Professor Rindfleisch, on good food and a free blood-formation. These failing, tuberculosis becomes evident, and is then handed down by inheritance. The disease shows itself in a characteristic inflammatory process, under which Professor Rindfleisch reckons (1) disseminated miliary tuberculosis, the result of the tubercular poison alone, appearing in the form of miliary and sub-miliary nodules in most of the organs of the body; (2), the more localised miliary tuberculosis, where, in consequence of some local mechanical irritation, the disease appears only in a single organ (lung, brain, peritoneum); (3), localised miliary tuberculosis, where miliary tubercles are developed in the neighbourhood of an inflamed centre, ultimately finding their way into the inflamed tissue itself; and (4), inflammatory processes, especially ulcerations of chronic course, with little, or perhaps no, local formation of miliary tubercles, but very generally with tuberculosis of lymphatic glands. These inflammations, Professor Rindfleisch points out, occur from causes which, in ordinary circumstances, would scarcely produce a passing congestion. The inflammatory product consists, in the first place, in a slow growing deposition of white blood-cells in the connective tissue of the irritated parts. After a time, changes occur. 1. Part of the cells take an epithelioid character, and are termed tubercle-cells, being three to five times as large as white blood-cells. 2. Giant-cells are developed, which, however, are not to be regarded as characteristic of tubercle. 3. After the aggregations of epithelial cells have produced certain centres in the new growth, there appears a fine granular albuminous substance, either coagulated lymph, or developing zöogloea masses, which, either separates, or involves in it the epithelial cells. 4. Lastly comes cessation of the inflammatory products owing to defective nutrition. These various peculiarities of the inflammation appear in the different forms of tuberculosis enumerated above. JAMES ANDERSON, M.D.

HUTCHINSON ON THE PRECANCEROUS STAGE OF CANCER, AND THE IMPORTANCE OF EARLY OPERATIONS.

In a clinical lecture on this subject (*Brit. Med. Jour.*, January 7th), Mr. Jonathan Hutchinson observes: The patient who has just left the theatre is the subject of cancer of the tongue in an advanced stage. As I demonstrated to you, the lymphatic glands are already enlarged. It is hopeless to think of an operation, and there is nothing before him but death, preceded and produced by a few months of great and continuous suffering. His case, I am sorry to say, is but an example of what is very common.

Not a month passes but a case of cancer of the tongue presents itself in this condition. The cases which come whilst the disease is still restricted to the tongue itself are comparatively few; nor does this remark apply only to the tongue. 'Too late! Too late!' is the sentence written but too legibly on three-fourths of the cases of external cancer concerning which the operating surgeon is consulted. It is a most lamentable pity that it should be so; and the bitterest reflection of all is, that usually a considerable part of the precious time which has been wasted has been passed under professional observation and illusory treatment. In the present instance, the poor fellow has been three months in a large hospital, and a month under private care. I feel free, gentlemen, to speak openly on this matter, because my conscience is clear that I have never failed when opportunity offered, both here and elsewhere, to enforce the doctrine of the local origin of most forms of external or surgical cancer, and the paramount importance of early operation. I have tried every form of phraseology that I could devise as likely to impress this lesson. Nearly twenty years ago, I spoke to your predecessors in this theatre concerning the 'successful cultivation of cancer'; telling them how, if they wished their patients to die miserably of this disease, they could easily bring it about. The suggestion was, that all suspicious sores should be considered to be syphilitic, and treated internally by iodide of potassium, and locally by caustics, until the diagnosis became clear. More recently, I have often explained and enforced the doctrine of a precancerous stage of cancer, in the hope that, by its aid, a better comprehension of the importance of adequate and early treatment might be obtained. According to this doctrine, in most cases of cancer of the penis, lip, tongue, skin, etc., there is a stage—often a long one—during which a condition of chronic inflammation only is present, and upon this the cancerous process becomes engrafted. I feel quite sure that the fact is so. Phimosis and the consequent balanitis lead to cancer of the penis; the soot-wart becomes cancer of the scrotum; the pipe-sore passes into cancer of the lip; and the syphilitic leucoma of the tongue, which has existed in a quiet state for years, at length, in more advanced life, takes on cancerous growth. The frequency with which old syphilitic sores becomes cancerous is very remarkable; on the tongue, in particular, cancer is almost always preceded by syphilis, and hence one of the commonest causes of error in diagnosis and procrastination in treatment. The surgeon diagnoses syphilis, the patient admits the charge, and iodide of potassium seems to do good; and thus months are allowed to slip by in a state of fools' paradise. The diagnosis, which was right at first, becomes in the end a fatal blunder, for the disease which was its subject has changed its nature. I repeat that it is not possible to exaggerate the clinical and social importance of this doctrine. A general acceptance of the belief that cancer usually has a precancerous stage, and that this stage is the one in which operations ought to be performed, would save hundreds of lives every year. It would lead to the excision of all portions of epithelial or epidermic structure which have passed into a suspicious condition. Instead of looking on whilst the fire smouldered, and waiting till it blazed up, we should stamp it out on the first suspicion. What is a man the worse if you have cut away a warty sore on his lip, and, when you come to put sections under the microscope, you find no nested

cells? If you have removed a painful hard-based ulcer of the tongue, and with it perhaps an eighth part of the organ; and, when all is done, and the sore healed, a zealous pathological friend demonstrates to you that the ulcer is not cancerous, need your conscience be troubled? You have operated in the precancerous stage, and you have probably effected a permanent cure of what would soon have become an incurable disease. I do not wish to offer any apology for carelessness, but I have not in this matter any fear of it.

MARCY ON THE DEVELOPMENT OF THE OSSEOUS CALLUS

IN FRACTURES OF THE BONES OF MAN AND ANIMALS.

FROM the study of fractures of bones in man and animals, and especially from a number of experiments made on rabbits, Dr. Marcy (*Ann. of Anat. and Surg.*, Feb. 1881) arrives at the conclusion that the doctrine of the formation of the callus, either as taught by Ollier, *i.e.*, as being derived from the osteogenetic layer of the periosteum, or by Billroth, *i.e.*, as being formed by the medulla of the Haversian canals of the extremities of the fractured bone, is untenable.

Professor Ercolani of Bologna had already maintained that neither the periosteum nor the extremities of the fractured bone are concerned in the formation of the osseous callus, but that, on the contrary, the periosteum becomes destroyed in the place where the callus is formed. Dr. Marcy finds, that the material forming the soft callus in the first days after a fracture is furnished from the blood of the lacerated vessels both of the connective and of other tissues injured, including those of the medulla and Haversian canals. That, however, the part the medulla takes in the formation of the callus is, in some cases, in the long bones, not indispensable, is proved by the fact that, in the bones of birds, which have no medulla, a well-formed callus may be met with. In man and animals, where the fragments of the broken bone are kept apart, the medulla takes no part in the formation of the osseous callus, this being entirely of external origin, and the surfaces of the separated fragments remain inert.

Dr. Marcy, having examined several specimens of healed fractures in animals, and also a large number in man, found definite evidence of atrophy of the extremities of the fractured bone. In fissures, or partial fractures in bones, especially of the cranial vault, there is no new formation taking place from the borders of the fracture, but distinct evidence of absorption and atrophy. These changes may be referred to the destruction of the periosteum at the place of injury.

From a series of carefully conducted experiments on rabbits, Dr. Marcy obtained specimens of fractures of the bones of the leg from the third to the twenty-fourth day. These were injected with blue gelatine solution from the aorta, and, after decalcification, sections were cut therefrom and examined with the microscope. The deductions made from this examination are these: the old periosteum at the point of injury becomes destroyed; the exudation from the parts surrounding the fracture is well developed as early as the sixth or eighth day, and covered with a new periosteum. In common with Ercolani, the author finds 'that the new periosteum

impresses its osteogenetic action on the exuded cellular elements, and that it is by this that they are transformed into bone'.

[From the description of the appearances in the microscopical specimens as given in the paper, it appears, that the formation of the osseous callus takes place in essentially the same manner as that described by Billroth; that is to say, the new blood-vessels and the cells of the soft callus, as well as the new periosteum—or, rather, its osteogenetic layer, it seems, are derived from the medullary tissue of the Haversian canals at the extremities of the fractured bone.—*Rep.*] E. KLEIN, M.D.

LEVIS ON THE TREATMENT OF HYDROCELE AND SEROUS CYSTS IN GENERAL BY THE INJECTION OF CARBOLIC ACID.

DR. R. J. LEVIS, Surgeon to the Pennsylvania Hospital, and to the Jefferson College Hospital, Pennsylvania, in a paper reported from the *Transactions of the Medical Society of the State of Pennsylvania*, says: The objects of the operative procedures employed for the radical cure of hydrocele of the vaginal tunic of the testis is the obliteration of the serous sac, either by the process of suppuration, or the induction of plastic exudation through a lower grade of inflammation. There can be no question in the minds of practical surgeons as to the greater advantages of its accomplishment by the latter plan, and it is only necessary that it shall be rendered more controllable and more certain in its results to insure its exclusive adoption.

Since the method of cure by the suppurative process has been generally abandoned and condemned as too prolonged, painful, and dangerous, a variety of substances have been used for injection into the sac to produce the desired inflammation of its serous lining. It is the object to produce an inflammation which shall neither fall short of, nor exceed in its intensity, the plastic grade. The substances generally used for this purpose do not act with sufficient certainty in securing this result, and their action is painful and not sufficiently under control.

My experiments on the subject have been directed with the object of determining what substance can best secure the obliteration of the secreting surface and the adhesion of the walls of the cyst, with the most certainty and the greatest freedom from suffering and danger. With the impression that a degree of inflammation not transcending that of plastic exudation could be produced by carbolic acid, in November 1871, at the Pennsylvania Hospital, I injected for the first time one drachm of the deliquescent crystals into the sac of a large hydrocele. Having been previously accustomed to use for this purpose the tincture of iodine, and having witnessed the suffering which follows, I was at once surprised to find that the new procedure was entirely painless. The patient spoke only of a sense of numbness, and no inconvenience was felt until, on the succeeding day, the desired inflammatory condition became developed. Since that time I have always resorted to this material for the treatment of hydrocele in all my cases in the Pennsylvania Hospital, in the Jefferson College Hospital, and in private surgical practice, and now, after an experience of more than nine years, believe it to be the most satisfactory for the object.

For the purpose, crystallised carbolic acid is maintained in a liquefied state by a five or ten per cent. addition of either water or glycerine, the quantity of the diluent to be added varying with the quality of the article, and with the temperature of the apartment; but it is an object to reduce the crystals to a fluid state with no more dilution than may be necessary. Liquefaction could readily be effected by the application of a moderate amount of heat, but reduction of heat might produce solidification in the cannula.

After the usual tapping of the sac, I inject the liquefied crystals of carbolic acid with a syringe, having a nozzle sufficiently slender and long enough to reach entirely through the cannula. The illustration represents the syringe, reduced to one-half the proper size. The object of having this special form of instrument is to insure the placing of the injecting material entirely within the cavity of the cyst, without any reflow which would irritate the surface of the skin of the scrotum or of the fingers of the operator, and without the possibility of injecting it into the connective tissue between the skin and the tunica vaginalis. This form of syringe is supplied by the leading surgical instrument-makers.

The quantity injected varies in accordance with the size of the tumour, from thirty to sixty grains. Thirty grains of undiluted carbolic acid is the smallest amount that I have used, and the largest quantity a drachm and a half.

As soon as the carbolic acid is lodged within the sac, the scrotum is freely manipulated by the fingers of the operator, so as to diffuse it over the lining walls of the hydrocele. A sense of warmth is produced, which is quickly followed by a decided numbness, and the patient is at once able to walk about and to attend to his ordinary duties without inconvenience. I have not been in the habit of enforcing rest on the patient until after the lapse of twenty-four hours or a longer time, when intrascrotal inflammation renders quietude agreeable or imperative.

I have never, after this procedure, been able to detect any general toxic effects from the absorption of carbolic acid. Such systemic manifestations as general depression, and the characteristic evidence of the brown discoloration of the urine, I have looked for with negative results. I believe that the action of strong carbolic acid on surfaces secreting albuminous fluids is to seal them, and, as it were, to so shut them off from the system, that absorption cannot readily take place. This sealing of an absorbing surface involves a surgical principle in antiseptic treatment which is applicable in very many instances in which denuded or ulcerating surfaces are exposed to septic infection. I state it as an important surgical resource that, in certain compound fractures and destructively lacerated wounds, where septic exposure is inevitable, the danger from absorption may be averted by producing the occluding influence of strong carbolic acid.

Within my own experience, no failure to radically cure hydrocele in the manner I present has, to my knowledge, occurred. I have never failed to produce with carbolic acid the proper amount of inflammation within the walls of the sac, but have

been informed that such failures have occurred in other hands, yet do not know the particulars of the treatment and results in those cases. In no case of hydrocele or other simple serous cyst have I seen inordinate inflammation or suppuration follow injection. In a case of cyst within a disorganised testicle, which was probably sarcomatous, treated with the injection of carbolic acid, high inflammation and suppuration occurred. In three instances of hydrocele of the tunica vaginalis testis, in which the previous injection of the tincture of iodine had failed, carbolic acid made a permanent cure.

I do not propose to determine, in the entire range of cases of serous, synovial, and mucous cysts, those to which this treatment is applicable. All forms of cysts which are usually subjected to any form of operative treatment on the principle of producing plastic adhesion of their walls, such as intrascrotal cysts and those of the anterior region of the neck, may be deemed amenable to the treatment here indicated. A large class of synovial bursæ, whether they be enlargements of the normal bursal sacs of the body, or adventitious formations developed by friction or pressure, are proper cases for this treatment. The bursal developments which occur on salient points of the limbs, as those over the patella and on the olecranon process, called respectively housemaid's knee and miner's elbow, can be safely and effectively treated by very free incision, emptying the contents, and then mopping the cyst-walls thoroughly with undiluted carbolic acid, deliquesced simply by heat. A dressing of carbolised oil or ointment is then continued until cicatrisation is completed.

I believe that in carbolic acid we have a means, if properly used, of producing almost uniformly the proper plastic inflammation necessary for the radical cure of hydrocele and other serous cysts, which are usually deemed amenable to treatment on such principle, and I recommend its use to the profession.

HAYES ON TRIPIER'S AMPUTATION OF THE FOOT.

CHOPART'S method of disarticulation through the median tarsal joint, performed for the first time ninety years ago, though received at first with approval with most surgeons, is now seldom performed in this country, and, since 1860, has ceased to be favoured in France. It was soon found that many healed stumps are apt to assume most unsatisfactory conditions. The heel is liable to become upwards and backwards, and the cicatricial tissue on the anterior and depressed portion of the stump to undergo ulceration or to become very tender. Besides this so-called equinisation, and the consequent mischief affecting the soft parts, disease may attack the os calcis, and necessitate a secondary amputation. Within the past two years, Professor Tripier of Lyons has proposed an operation calculated to overcome all the defects associated with Chopart's method. Mr. Hayes of Dublin has tested this new operation upon two occasions, and, in a recently published reprint of an article in the *Dublin Journal of Medical Science* for December last, expresses his full belief that this method deserves to occupy a high position amongst the many valuable achievements of the French school of surgery.

The following description is given of Tripier's amputation. 'The surgeon's knife is made to take the following course. Commencing at the outer edge of



the tendo Achillis, on a level with the external malleolus, a skin-wound is to be made in a direction at first downwards and forwards, and afterwards forwards, so as to pass two finger-breadths below the malleolus, and then to approach by a finger's-breadth the upper part of the base of the fifth metatarsal bone. From this point the incision is to be carried upwards, forwards, and inwards, so as to reach the inner margin of the tendon of the extensor proprius pollicis, just behind the first tarso-metatarsal articulation. The knife should now be made to cut downwards and forwards, so as to enter the sole of the foot a finger's-breadth in front of the dorsal wound. The incision is then to be carried, with a gentle forward curve, outwards and backwards, until it can be made continuous with the first portion of the wound below the outer malleolus. The divided integument having undergone some degree of retraction, the dorsal and plantar structures are to be divided half an inch behind the superficial wound; the soft parts are then to be separated from the bones, extreme care being taken to preserve uninjured the vessels contained in the inner part of the plantar flap. The surgeon will find it convenient at this stage to disarticulate the cuboid and scaphoid from the os calcis and astragalus, just as in Chopart's amputation. Having done so, he will proceed to divide and separate the periosteum from the under surface and posterior extremity of the os calcis up to the level of the sustentaculum tali, where the bone is to be sawn through in a direction from behind and within, forwards and outwards, so to leave a surface, which will be at right angles with the axis of the tibia, when the limb is caused to assume the ordinary position for walking or standing. All sharp edges and angles of bone should now be rounded off. The posterior tibial nerve should be exposed in the plantar flap, and divided as high as possible, with a view to prevent risk of neuroma. The vessels having been secured, the flaps are to be brought together, and the limb so dressed as to secure moderate flexure of the ankle-joint during the period of repair.

The chief advantages belonging to this operation of Professor Tripier, are stated to be these. 1. Comparatively short flaps will be found quite sufficient to afford complete covering for the surfaces of bone. 2. Tendons will have been divided well in front of their sheath-connections with the astragalus and os calcis, so that, when they form new attachments, the muscles which act upon them will be capable of regulating flexion and extension of the ankle-joint. 3. Section of the os calcis will at once prove whether the bone is healthy throughout, and, in the event of there being any evidence of central disease, the operation can readily be converted into one of disarticulation at the ankle. 4. Removal of the lower part of the os calcis, in the manner described, leaves an extremely broad even surface, which at once secures the patient against risk of subsequent distortion, and causes pressure to be diffused over such a considerable extent of soft tissue as to render the chance of ulceration well-nigh impossible. Besides other advantages attendant on this operation, the wound heals rapidly, and, within a very short space of time, the limb becomes capable of sustaining the whole weight of the body.

W. JOHNSON SMITH.

MOORE AND BIRDWOOD ON THE OPIUM QUESTION.

DEPUTY SURGEON-GENERAL W. J. MOORE, Bombay Army, writes that there is evidence that the Chinese were formerly a very drunken nation. Opium smoking has succeeded the tendency to spirit drinking, principally from the cheapness of opium as compared with spirits. If it were possible to prohibit opium altogether to the Chinese, alcohol, or some other stimulant, would take its place, or there would be a new departure in the history of nations. Thirst for stimulants has existed in all countries. When we have removed our own beam by performing the impossible feats of stopping all distilleries, pulling down all gin-shops, banishing all distillers, retail vendors, importers and exporters of alcohol, then it will be time to talk of 'the iniquity of the opium traffic, and of the moral obliquity of those concerned'. It must be admitted by the unprejudiced that the effects of opium are at least not worse than the injuries produced by alcohol.

Sir George Birdwood, formerly Professor of Materia Medica in the Medical College, Bombay, holds (*Times*, Jan. 20th and 31st, 1882) that opium-smoking is absolutely harmless. He does not place it in the same category with even tobacco-smoking, for tobacco-smoking, if carried to excess, may be injurious, particularly to young people. He considers that it is as harmless as smoking willow-bark, or inhaling the smoke of a peat fire, or the vapour of boiling water. The freedom of opium-smokers from bronchial and thoracic diseases is deserving of consideration. The Chinese converts to Christianity suffer greatly from consumption. The missionaries will not allow them to smoke; and, as they also forbid their marrying while young, they fall into those depraved habits of which consumption is the inexorable witness and scourge. When spitting of blood comes on, the opium-pipe is its sole alleviation. None of the active principles of opium are volatile. No effect is produced by opium-smoking beyond that pleasant and peaceful warmth throughout the body which comes of sitting over a peat fire on a chilly day, or inhaling the fragrant vapour from a bowl of whisky toddy as the boiling water is stirred into it. The alleged special aphrodisiac properties of opium should be entirely discredited. The general debauched habits of the lower outcast populations of the cities of China are responsible for their cachectic appearance, and not the accidental circumstance that some of them indulge in opium-smoking.

[Reference can also be made to the following writings on the subject. Stamford Raffles, *Java*, vol. i, pp. 111-12; Tod, *Rajasthani*, vol. i, 553; John Malcolm, *Memoir on Central India*, pp. 45, 76, 359; James Burnes, *Narrative of a Visit to the Court of Scinde, and a Sketch of the History of Cutch*, p. 230; John Crawford, *Dictionary of the Malay Archipelago*; W. C. B. Eatwell, *Selections from the Records of the Bengal Government on the System of Cultivating the Poppy, and of Preparing Opium in the Benares Opium Agency* (republished, *Pharmaceutical Journal*, 1851-2); Elijah Impey, *Report on the Cultivation, Preparation, and Adulteration of Malwa Opium*, Bombay, 1848; Tylor, *Anthropology*, p. 268; Benjamin Brodie, *Psychological Enquiries*, p. 248; Medhurst, *China*; Marsden, *Sumatra*, p. 278; O'Shaughnessy, *Bengal Dispensatory*, p. 180; George Birdwood, *Vegetable Products of Western India*; Sirr, *China and the Chinese*; Long, *The Chinese as they are*; R. H. Cobbold, *Pictures of the Chinese*; Doolittle

Social Life of the Chinese; Osgood, *New York Medical Record*, 1878; Ayres, *Medical Times and Gazette*, 1878; Gardner, *Parliamentary Blue Book*, 1881; Chetun Shah, *Indian Medical Gazette*, March 1881; Minturn, *From New York to Delhi.—Rep.*

WILLIAM MURRELL, M.D.

STILLMAN ON AN AID TO THE MECHANICAL TREATMENT OF WEAK ANKLES AND INVERTED FEET.

DR. CHARLES F. STILLMAN of New York writes thus in the *New York Med. Record*. If we examine the ligamentous structure of the ankle-joint, we observe that externally the ligaments are placed so as to allow more mobility than internally—nature evidently relying upon the inherent contractile power of the peronei muscles to hold the foot at its natural angles with the leg, and to perform all necessary eversion. The weakness or insufficiency of these muscles is of itself a sufficient cause of the deformity we are considering, even though the supports of the joint be otherwise normal; but these may also be unduly relaxed. A tendency to turn the ankle under, to have it give way externally, to point the toes inward and downward, and an habitual stumbling, shuffling gait, are the main symptoms displayed.

The instruments which could hitherto be procured for the purpose of supporting the limb while the muscle is improving afforded support, but allowed only a vertical motion in the ankle-joint. This feature was shared by all, and is incorrect, since the normal degree of lateral movement should be permitted.

Dr. Stillman disapproves of Sayre's and Barwell's methods, and says:

Another form of apparatus used for producing eversion is Professor F. H. Hamilton's. It is not practicable except on level surfaces, but is very effective, and produces a true eversion.

Sayre's rotating screw is open to the objection that it allows no lateral movement at the ankle, and, therefore, while effective as a rotator, is useless in producing eversion; and, in Dr. N. M. Shaefer's and others, the fault is the same.

Dr. Gregory Doyle (*Trans. of the Amer. Med. Assoc. for 1880-81*) has recently devised an apparatus which is an arrangement for pulling the outside of the foot upward at various angles with the leg, by means of a spiral spring, and does not admit of a true local eversion.

I have devised an apparatus for the cure of this condition which is effective, because it is physiological, and it exhibits several principles distinct from any heretofore introduced to the profession.

1. It consists merely of a steel strip worn outside the leg only, so that there is nothing on the inside to interfere with the child's walking, and is extremely light and comfortable. 2. It can be worn with any shoe, and is detachable at pleasure. 3. It is attached to the bottom of a shoe by a pivot in the centre of motion of the foot, thus allowing lateral motion in the ankle, a feature not possessed by any other form of apparatus. 4. The joint at the ankle is placed at the back of the heel, thus affording increased leverage for the action of the elastic cords and preventing the foot from going 'over the centre' when the cords are in action. 5. The traction produced by the elastic cords corresponds to the lines

of direction of the force exerted by the peronei muscles.

There are two essentials to the complete and perfect action of this brace: first, the pivot should be located at or near the centre of motion of the foot; and second, if an everting cord be used, the girth about the leg should be prevented from rotating.

The centre of motion (Fig. 1) is the point where two bisecting lines meet when drawn through the foot while rotated at different angles; and, when a person stands erect, a line drawn vertically through the hip-joint should pass at or near this point; and

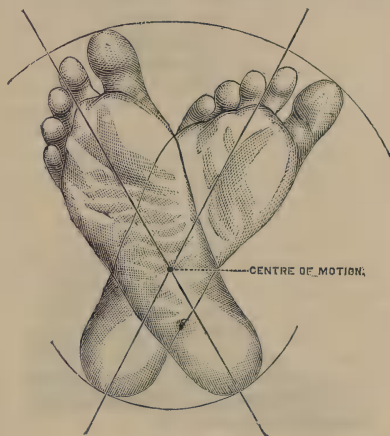


Fig. 1.

this is the proper position in which to place an attachment between a brace and shoe, instead of against the heel, as in all other forms of apparatus.

Fig. 2 exhibits the pivotal attachment of the brace to the shoe when the everting cord is not attached; and Fig. 3 shows the change produced by the action of the everting cord when attached.



Fig. 2.

Fig. 3.

¶ The brace is simple, unique, and efficient in all cases of weak ankles and inverted feet. In weak ankles alone, without inversion, an elastic strap passing from the foot to the brace, as in Fig. 4, is to be employed.



Fig. 4.

Fig. 5.

If inversion alone be present, the elastic cord is adjusted, as shown in Fig. 6 after the fixation of the

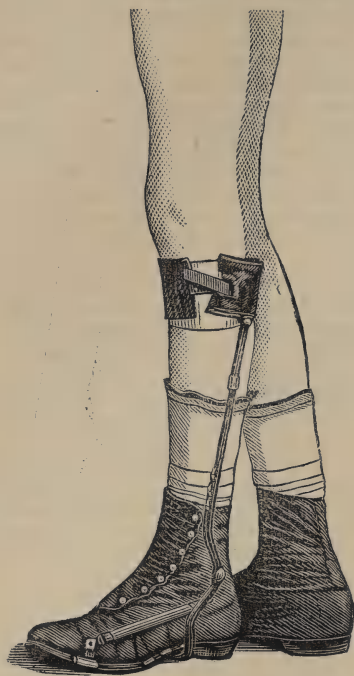


Fig. 6.

girth. If both conditions be present, both cords must be employed, as in Fig. 5.

E. NOBLE SMITH.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. BUZZARD.—Arsenic in Spasmodic Torticollis. (*Brit. Med. Jour.*, Dec. 1881.)
2. FAGGE.—Salicylates in Acute Rheumatism. (*Lancet*, Dec. 1881, p. 1030.)
3. STRANGE.—Salicylic Acid as a Specific in Acute Rheumatism. (*Brit. Med. Jour.*, Dec. 1881, p. 1012.)
4. CLAY.—Chian Turpentine in Cancer. (*Lancet*, Dec. 1881, p. 1033.)
5. NEALE.—Suggestions for treating Hydrophobia. (*Lancet*, Dec. 1881, p. 1070.)
6. SPARWAY.—Asclepias as a Diuretic. (*Brit. Med. Jour.*, Dec. 1881, p. 978.)
7. MILLICAN.—Ergotine used locally in Erysipelas. (*Brit. Med. Jour.*, Dec. 1881, p. 935.)
8. WÖFLER.—The Use of Iodoform in Affections of the Mouth. (*Centralbl. für Chir.*, No. 48, 1881.)
9. SCHÄFFER.—The Action of Mydriatics. (*Archiv für Ophthal.*, vol. x; and *Gaz. Hebd. de Méd.*, Jan. 13, 1882.)
10. LUTON.—The Treatment of Alcoholism. (*Gaz. Hebd. de Méd.*, Jan. 30, 1882.)
11. BOÉCHAT.—Treatment of Goitre by Iodoform. (*Correspond. für Schweizer Ärzte*, No. 1, 1882.)
12. GUILLEMIN.—Inhalation of Medicated Vapours in Diseases of the Respiratory Organs. (*Arch. Méd. Belges*, July 1881.)
13. ANTHONI.—New Formula for Balsamic Pills. (*Thér. Contemp.*, June 1, 1881.)
14. STREITZ.—The Hypodermic Administration of

Mercurials in Syphilis. (*Arch. Méd. Belges*, July 1881; and *New York Med. Record*.)

15. MARTINEAU.—Subcutaneous Injection of Ammoniated Mercurial Peptone in Syphilis. (*Revue de Méd. et de Chir. Prat.*, Dec. 1881.)

16. GRESLON.—The Treatment of Sciatica by Hypodermic Injection of Nitrate of Silver. (*La France Méd.*, Sept. 26, 1881.)

17. SALOMON.—Therapeutic Uses of Verba Santa. (*New Orleans Med. and Surg. Jour.*, Nov. 1881.)

18. MALHERBE.—Tartar Emetic in Chorea. (*Jour. de Méd. de l'Ouest*.)

19. TAURET.—Solutions of Caffeine for Hypodermic Injection. (*Gaz. Hebd. de Méd.*, Jan. 6)

20. VIGIER.—Solution of Alkaloids in Oil or Glycerine. (*Gaz. Hebd. de Méd.*, Jan. 6, 1881.)

21. STITES.—Ergot in Lead-Palsy. (*Thér. Gaz.*; and *Philad. Med. and Surg. Rep.*, Nov. 19, 1881.)

22. Ergotine in Pharyngitis. (*La Revue Mens. de Laryngol.*)

23. RIOPEL.—Collodion in Rheumatism. (*Med. and Surg. Reporter*, Oct. 8.)

24. PORTER.—Eruption from Oil of Tanxy. (*New England Med. Jour.*, Oct. 15.)

25. LEWIN and ROSENTHAL.—The Form taken by Chrysarobin in External and Internal Use. (*Virchow's Archiv*, Band lxxxv.)

26. RIBBERT.—The Effect of Tannic Acid in Albuminuria. (*Centralbl. für die Med. Wiss.*, No. 3, 1882.)

27. GUTMANN.—The Action and Uses of Aspidospermin. (*Archiv für Exper. Pathol. und Pharm.*, Heft vi.)

28. STADELMANN.—The Action of Toluylendiamin. (*Archiv für Exper. Pathol. und Pharm.*, Heft v.)

29. DONATH.—The Physiological Effects and Chemical Reactions of Chinotine. (*Berichte der Deutsch. Chem. Gesells.*, No. 14, 1881.)

30. GNAUCK.—The Action of Hyoscine. (*Centralbl. für die Med. Wiss.*, No. 45, 1881.)

31. BEETZ.—Iodoform Insufflations in Laryngeal Phthisis. (*Berl. Klin. Woch.*, No. 2, 1882.)

1. Buzzard on Arsenic in Spasmodic Torticollis. —In the *Brit. Med. Jour.*, Dec. 1881, p. 937, Dr. Buzzard reports a case of this disease, cured by the use of liquor arsenicalis in five-minim doses, thrice a day. Dr. Buzzard remarks that the pathology of such cases is still obscure. They often resist long and varied treatment. When recovery takes place, it is always in young women. In one case that had been under Dr. Buzzard's care, firm pressure in the left ovarian region controlled, for a time, the spasm.

2. Fagge on the Use of Salicylates in Acute Rheumatism.—Dr. C. Hilton Fagge has contributed one to a long series of valuable papers in recent numbers of the *Lancet* (Dec. 1881, pp. 1030), confirming the great powers, said to be possessed by salicin, salicylic acid, and salicylate of soda, in the treatment of acute and chronic forms of rheumatism. Sufficient distinction is scarcely made between the various drugs, most writers classing them under the heading, Salicylic Acid and its Compounds.

3. Strange on Salicylic Acid as a Specific in Acute Rheumatism.—Dr. W. Strange, among many other contributors to the *Brit. Med. Jour.*, Dec. 1881, p. 1012, bears testimony to the specific action of salicin and its congeners in the treatment of acute rheumatism.

4. Clay on Chian Turpentine in Cancer.—Mr. John Clay, in the *Lancet*, Dec. 1881, p. 1033, reiterates all his previous assertions regarding the value of Chian turpentine in cases of cancer. (*Vide LONDON MEDICAL RECORD*, 1880, pp. 142, 316, 446). As in cases of vaginal cancer, vinegar injections and insufflations of powders, composed of charcoal, sulphate of copper, and tannin, were combined with the

use of the turpentine, any good resulting could not be claimed entirely by this latter drug. In the *Brit. Med. Jour.*, Dec. 1881, p. 1037, a case at Brighton is stated to have improved while taking the turpentine.

5. *Neale on Suggestions for Treating Hydrophobia*.—In the *Lancet*, Dec. 1881, p. 1070, Dr. Richard Neale suggests, after careful study of the numerous cases of hydrophobia that of late years have been recorded in the medical journals, the following plan of treatment, as one likely to yield the best results: 1. The Turkish bath, from which more benefit has been hitherto derived than from any other mode of treatment; 2. Jaborandi or pilocarpin, in order to eliminate as much of the poison from the salivary glands as possible; 3. Filling the air with antiseptic vapours, such as iodine, eucalyptus oil, or thymol, in order to destroy, if possible, any germs circulating in the body generally; 4. Relieving the spasms of the throat by small hypodermic injections of morphia over the sensory portions of the superior laryngeal nerve, as done by Rossbach previously to operations about the larynx; 5. Securing a sufficient supply of water to the system, in order to wash out the waste products of the body, either by enema, or by instilling water into the peritoneal cavity by the aid of Southey's tubes; 6. Keeping the patient actively employed, both in mind and body; 7. The judicious use of curara, a drug that has often proved very valuable in relieving many of the most urgent symptoms, but one better omitted, if possible. In the first edition of the *Medical Digest*, twenty-nine remedies were noticed as recommended, more or less highly, in the treatment of hydrophobia. During the last few years, sixteen additional specifics (?) have been placed on record.

6. *Spurway on Asclepias as a Diuretic*.—Mr. Chas. Spurway, in the *Brit. Med. Jour.*, Dec. 1881, p. 978, speaks highly of the diuretic powers of the asclepias syriaca, or common milk-weed, of America. Mr. Spurway employed the remedy, after failure with all other known diuretics, in a case of cardiac dropsy. While recognising the important part played by tapping and milk-diet, which were employed in this case, Mr. Spurway is so convinced of the efficacy of the drug, that he hastens to bring it before the profession.

7. *Millican on Ergotine used Locally in Erysipelas*.—Mr. K. W. Millican, in the *Brit. Med. Jour.*, Dec. 1881, p. 935, states that a solution of ergotine (1 in 50) is a most valuable application in facial erysipelas, and begs that a trial may be made by others, and its effects reported. R. NEALE, M.D.

8. *Wölfler on the Use of Iodoform in Affections of the Mouth*.—Dr. Anton Wölfler of Vienna has been led by experience of the favourable course of open and deep wounds, when dressed with iodoform, to try the value of this agent when applied to similar open surfaces situated just within the natural orifices of the body—regions to which it is difficult to apply dressings under antiseptic conditions. In the *Centralbl. für Chir.*, No. 48, 1881, this surgeon gives the general results of the use of iodoform dressings, in eighteen cases of removal of more or less of the tongue for carcinoma, by Professor Billroth, during a period of six months. In several of these cases, much of the floor of the mouth was removed, together with the corresponding submaxillary gland and affected lymphatic gland; and in some it was found necessary to perform partial resection of the lower jaw. In all the cases, according to Professor Billroth's usual practice, the lingual artery was tied at the beginning of the operation, and occasionally

both lingual and facial arteries had to be previously secured. All the patients recovered, and, Dr. Wölfler states, without any decided elevation of temperature, and without the occurrence of any of the serious traumatic complications and local reactions which occur frequently after operations on the tongue. In each case, the raw surface in the mouth was dressed by a long and narrow strip of gauze that had been prepared with resin, in alcoholic solution and glycerine, and dusted over, whilst still moist, with finely powdered iodoform. The strip of gauze was allowed to remain in contact with the wound for about a week. The small quantity of iodoform contained in the strip of prepared gauze is sufficient to maintain the wound completely and permanently aseptic; and it is to the action of this dressing that the excellent results in the above-mentioned cases of lingual carcinoma are, Dr. Wölfler holds, to be regarded as directly due. If the results of these cases be compared with those previously observed after extirpation of the tongue, one must arrive at the firm conviction, according to Dr. Wölfler, that for wounds in the mouth we have, in iodoform, a convenient and very reliable antiseptic dressing. W. JOHNSON SMITH.

9. *Schæffer on the Action of Mydriatics*.—The comparative effect of duboisine and homatropine on the eye have been investigated by Schæffer (*Archiv für Ophthalm.*, vol. x, p. 196; *Gaz. Hebdom. de Méd.*, Jan. 13, 1882, p. 28). In man, the effect on the pupil of atropine locally applied was to cause mydriasis in fourteen or fifteen minutes, persisting to the fourth day. Duboisine produced dilatation in six or eight minutes, lasting about four days. Homatropine induced dilatation in nine minutes, but it lasted only three hours. As regards accommodation, this was influenced more rapidly (in ten minutes) with duboisine than with atropine (twenty-three minutes). The maximum of intensity was reached in an hour and a half after dilatation by duboisine, and in the same time with homatropine. It disappeared, however, more quickly with homatropine than with the other two alkaloids. Therapeutically, where a temporary effect only is required, homatropine may prove more serviceable than atropine or duboisine.

10. *Luton on the Treatment of Alcoholism*.—M. Luton (*Gaz. Hebdom.*, Jan. 13, 1882, p. 30, from a separate memoir) proposes to treat acute alcoholism by strychnia. In delirium tremens, he would employ hypodermically doses of one-twelfth of a grain two or three times a day. When given by the mouth, he does not hesitate to recommend nearly half a grain (30 milligrammes) of strychnia to be taken daily.

THOMAS STEVENSON, M.D.

11. *Boéchat on the Treatment of Goitre by Iodoform*.—M. Boéchat has used iodoform in the treatment of goitre as follows (*Corresp. für Schweizer Ärzte*, No. 1, 1882). 1. For external application, the writer used a glycerole of iodoform, which he covered with a layer of collodion. The results were negative in long-standing cystic or parenchymatous goitres; on the contrary, in fresh goitres of a soft consistence, the tumour diminished more rapidly than with iodine or iodide of potassium, but the odour was a serious drawback. 2. For internal use, M. Boéchat prescribed iodoform in pills of 1 centigramme each, giving not more than ten daily. This treatment was only used in the case of two patients having long standing goitres. 3. M. Boéchat submitted three cases to interstitial injections; the first patient, who had had a goitre since his childhood, was subjected for a fortnight to the injection of the

half of a Pravaz's syringe of saturated solution of iodoform in ether. This application was suspended in consequence of a very intense inflammatory reaction, but the goitre had diminished very notably. In the second case, two injections were sufficient to induce improvement in the old standing goitre; in the third case of goitre, suppurative came on without other improvement. Finally, M. Boéchat is of opinion that this is an useful method which it would be well to make known generally.

12. *Guillemin on Inhalation of Medicated Vapours in Diseases of the Respiratory Organs.*—After a careful and minute study of this important therapeutic question, the author thus summarises his impressions (*Archives Méd. Belges*, No. 1, July 1881).

1. The affections of the mucous membrane of the respiratory passages may in certain cases be advantageously treated by inhalations of medicated vapours. 2. In the first stage of acute inflammation of this mucous membrane, pain, cough, and painful sensations, which are the consequence of irritation and dryness, are rapidly calmed by inhalations of warm, moist, and aromatic vapours. 3. The calming action is still more decided if to the liquid, which serves for inhalation, there be added a small quantity of certain volatile calmative substances such as ether, distilled cherry-laurel water, or conium. 4. Frequently renewed inhalations of essence of turpentine, when they are administered at the commencement of the first period of inflammation, may arrest its progress. 5. The vapour of iodine exercises an irritant action on the mucous membrane of the air-passages. It induces efforts of coughing, and augments the secretion of the mucus of the air-passages. This irritating action may be utilised: (a). To diminish the swelling of the mucous membrane by causing the inflammation to pass from the first to the second stage; this indication is present especially in cases where the inflammation occupies the small bronchi; the swelling of the mucous membrane is sufficient to give rise to fear of respiratory insufficiency; (b) To diminish the viscosity of the products of morbid secretion by their admixture with the mucus, of which the vapours increase the formation; (c). To induce efforts to cough, and to disembarass the air-passages from the products which are there accumulated. 6. It is not only by its irritating properties that the vapour of iodine modifies the mucous membrane of the air-passages. Iodine, in reality, possesses the property of stopping purulent secretion, and, on the other hand, it arrests and prevents putrescence. Thus, when the mucous membrane of the air-passages yields a purulent secretion, resulting either from an acute inflammation in the third stage, or from a chronic inflammation, the inhalations of iodine will determine by degrees the quantity of pus, and finish in certain cases by entirely changing the nature of the secretion, which becomes completely mucous. 7. Although the essence of turpentine, in the fluid condition, is a sufficiently powerful irritant for the tissues with which it is placed in contact, inhalation of this essence is easily supported by the mucous membrane of the air-passages. It only brings on very moderate irritation, and very rarely provokes fits of coughing. 8. When the mucous membrane is affected, and yields a product of secretion, these vapours have the effect of diminishing the quantity and augmenting the consistency of this. 9. If the product of secretion be purulent, the inhalation of essence of turpentine, continued during a sufficiently long time, progressively diminishing the quantity of pus, may, in certain cases,

completely stop the secretion. The inhalations are indicated in all affections of the larynx, of the trachea, and of the bronchi, when accompanied by a very copious muco-purulent secretion without viscosities. On the other hand, the use of them must be avoided whenever expectoration is difficult, in consequence of the too great viscosity of the products of secretion. 10. In cases when these products are at the same time very copious and very viscous, it is possible, by alternate inhalations of vapours of iodine and vapours of turpentine, to rapidly diminish the quantity of secretion without increasing its viscosity. The inhalation of iodine should always be used in the first instance. 11. Inhalation of essence of turpentine is indicated in hæmoptysis, and is very successful in cases of hæmoptysis of average intensity.

13. *Anthoni's New Formula for Balsamic Pills.*—Dr. Anthoni, in the *Thérapeutique Contemporaine*, June 1, 1881, p. 343, gives the following prescription for balsamic pills: Extract of cinchona calisaya, 30 grammes; extract of conium, 1 gramme; balsamic tincture, 50 drops; marshmallow powder, q.s. Spread the extracts on a marble slab, add 10 drops of balsamic tincture, and mix with a knife or spatula; add again 10 drops of tincture, mix, and add 10 drops more, and go on in the same way until the 50 drops are incorporated. Spread the paste on the slab and let it dry for two hours, then add the necessary quantity of marshmallow powder, and form a mass which can be divided into 100 pills; silver these pills, or, still better, cover them with a layer of sugar. These balsamic pills are useful in simple phthisis, phthisis which is neither compound nor complicated. In simple phthisis, Dr. Anthoni has definitively given up the use of arsenical compounds, of cod-liver oil, quinine wine, antiscorbutic syrup, creasote, petroleum, sulphur, and all those drugs which only irritate the mucous membrane of the stomach, and disturb the digestive functions. He only gives these balsamic pills twice daily, one at breakfast and one at supper. These pills and a suitable manner of life are sufficient for the treatment of this form of phthisis. In compound or complicated forms of phthisis, he gives at the same time with these pills the medicines indicated, by the complicating affections, unless there be some gastric disorders to be overcome; in that case, he dispenses with their use until the digestive functions are restored to their normal condition.

14. *Streitz on the Hypodermic Administration of Mercurials in Syphilis.*—Guided by the counsels of Lewin in Berlin, Pick in Prague, and Sigmund in Vienna, Dr. Streitz has conducted a long series of experiments on the subcutaneous use of mercurials in syphilis, at the military hospitals in Brussels. The results of his studies are published in *Les Archives Méd. Belges*, July 1881; and *New York Med. Rec.* The most simple mercurial solution for hypodermic use was suggested by Lewin of Berlin. It is the following: R. Hydrarg. bichloridi, 40 cgr. (6 gr.); sodii chloridi, 5 gm. (75 gr.); aquæ destillatæ, 40 grm. (3 x); morph. hydrochloratis, 20 cgr. (3 gr.) Calomel is not adapted to hypodermic use. The cyanide of mercury may be employed in doses of from 1 to 5 milligrammes. The albuminate and the peptonate of mercury, originally prepared by Bamberger of Vienna, are the safest solutions of all, never producing abscesses or other lesions. The peptonate of mercury is prepared by the following process: (1) 1 grm. (15 gr.) is dissolved in 50 c.c. of distilled water and filtered; (2) 1 grm. (15

gr.) of sublimate is dissolved in 20 grm. (5 5) of water, and the solution mixed; a precipitate is formed, which is redissolved in 15 grm. (3 3/4) of a 20 per cent. solution of chloride of sodium. The solution now measures 85 c.c. Enough distilled water is added to make 100 c.c. The solution is allowed to stand one or two days, and is then filtered. Each gramme of the solution contains 1 ctgr. of the peptonate. Iodo-peptone is a preparation suggested by Pick of Prague, in which the iodide of potassium replaces the chloride of sodium in Bamberger's solution, above referred to. The combined effect of the iodide and the mercurial are obtained from this preparation, which has given great satisfaction. Dr. Streitz divided his observations into different groups, with a view to ascertaining certain facts. 1. The patients of the first group had reached different stages of syphilis. The object was, in this instance, to discover the solutions possessing the greatest number of advantages, and the places best adapted to injections, and the proper dosage. The solutions selected were those given above. Since they cause the least pain, one-half or two-thirds of a Pravaz's syringe should be injected into the deep cellular tissue. 2. The second group includes only patients treated at the beginning of the disease, after the chancre had disappeared. In all these patients the cutaneous symptoms were observed, but were not well marked. The eruptions were discrete, being in some places hard to detect, and rapidly disappeared. 3. In the third group, treatment was not instituted until after the appearance of the eruption. The symptoms disappeared quite as promptly as, and even more rapidly than, when other methods of mercurial treatment were employed. Six months after the injections were given, only one case among all those treated had experienced a relapse, which showed itself as a papular syphilide, although, as a rule, only 15 or 20 centigrammes of the sublimates had been given, divided among thirty or forty injections. The advantages of this method of treatment, as stated by the author, are: the precision in the dosage, the harmlessness of the injections and the integrity of the digestive organs which they insure; no deception can be practised; mercurial stomatitis is avoided; no abscesses need result; the cure is rapid. The author further says that secondary symptoms, in patients who had not been treated until the development of the symptoms, disappeared much more rapidly than when treated by other methods; the average period of duration for the papular syphilides was two weeks. Although injections given early—so soon as chancre was certainly diagnosed—did not prevent secondary symptoms, the latter were but slightly marked. The injections were particularly efficacious in subduing glandular enlargements at all stages of the disease.

15. *Martineau on Subcutaneous Injections of Ammoniated Mercurial Peptone in Syphilis.*—Subcutaneous injections of mercury in syphilis, after having been somewhat neglected, have been lately studied by M. Martineau, who has employed them extensively in his practice at the Lourcine Hospital (*Revue de Méd. et de Chir. Pratiques*, Dec. 1881). Injections offer certain advantages which give them great practical value. They never induce salivation, nor bring on any disturbance of the digestive functions, so that they can be administered to patients to whom, on account of their general condition, it would be impossible to give mercury by the mouth. M. Martineau reports many cases in which he has been able thus to treat

and cure patients who have been given up as incurable. The preparation employed by him was prepared by M. Delpech, the chemist, as follows:—Bichloride of mercury, 10 grammes; Catillon's dry peptone, 15 grammes; pure chloride of ammonium, 15 grammes. One gramme of this mercurial peptone represents 0.25 grammes of sublimate. This new product is employed as an injection in the following proportions. Solutions for hypodermic injections: Ammoniacal mercurial peptone, 40 centigrammes; distilled water, 30 grammes. This solution represents 4 milligrammes of sublimate to each injection of a syringe containing 1 gramme and 20 centigrammes. It keeps for several days. The following is of a more stable composition: Ammoniacal mercurial peptone, 40 centigrammes; neutral glycerine, 36 grammes. The dose is the same. Dr. Martineau has treated, by these different formulæ, since April, about 172 patients. Beginning at first by injecting half a syringe every day, equal to 2 milligrammes, he went on to inject 3, 4, and 5 milligrammes every day, up to as much as 10 milligrammes daily. The patients did not complain of any pain; there was no local reaction nor symptoms of salivation. By the mouth, he gives the following mixture: Ammoniacal mercurial peptone, 1 gramme; glycerine, 50 grammes; distilled water, 200 grammes. Each teaspoonful of this mixture represents 5 milligrammes of the sublimate. This preparation is thoroughly well tolerated by the stomach, but it does not act as rapidly and as certainly as the subcutaneous injection.

16. *Greslon on the Treatment of Sciatica by Hypodermic Injections of Nitrate of Silver.*—Dr. Greslon reports (*La France Méd.*, Sept. 26, 1881) the radical cure of a case of sciatica, which had resisted all ordinary methods of treatment, by hypodermic injections of the nitrate of silver. The patient, a lady 53 years of age, was of a gouty and rheumatic diathesis. She had recently suffered from several attacks of acute articular rheumatism. Her metacarpo-phalangeal articulations presented the characteristic deformities of arthritis deformans. In March 1879, the patient was attacked by sciatica in the left thigh and leg. The most severe pain was experienced in the calf and at the sacro-sciatic foramen. After unsuccessfully treating the case for twelve days with sinapisms, vesicatories, and anodynes, Dr. Greslon injected five drops of a twenty-five per cent. solution of nitrate of silver into the deeper tissues of the calf, at the most painful part. The injection was attended by violent pain, and followed by the formation of an abscess, which was opened at the end of a week. A few days later, the neuralgic pains had completely ceased in the leg. Eight drops of the same solution were then injected over the sacro-sciatic foramen. No abscess ensued, but an inflammatory exudation occurred, and discharged, six days after the puncture, some sero-sanguinolent matter. A week later, all pain had disappeared from the limb. The patient has had no relapse of the sciatica.

17. *Salomon on the Therapeutical Uses of Yerba Santa.*—Dr. Salomon reports (*New Orleans Med. and Surg. Jour.*, Nov. 1881) that yerba santa, or *eriodictum Californicum*, has, in his hands, proved to be a remedy of value in bronchorrhœa, in acute bronchitis, in the cough of measles, and as a prophylactic against laryngismus stridulus. Dr. Salomon employed the fluid extract of the leaves, in doses of ten minims to one drachm, glycerine being the best vehicle, as water and syrups precipitate the gummy portion of the preparation. The author thinks that the remedy acts specifically on the mucous membrane

of the air-passages as an astringent. In chronic bronchitis, he was compelled, in the majority of cases, to abandon its use, and administer other remedies.

18. *Malherbe on Tartar-Emetic in Chorea.*—M. Malherbe of Nantes has published, in the *Journal de Méd. de l'Ouest*, a paper tending to show that, notwithstanding the satisfactory results obtained by certain new remedies in chorea, tartar-etic should retain an important place in the treatment of that disease. Emetic doses are quite sufficient. Thus administered, tartar-etic produces its effects, especially in cases where the choreic spasm attains a high degree of intensity; and, if it do not always definitively cure, at least for a certain time it removes the danger. M. Malherbe recommends the simultaneous employment of large doses of morphia, either by the mouth or by hypodermic injection. For example, 10 or 15 centigrammes ($1\frac{1}{2}$ to $2\frac{1}{4}$ grains) of tartar-etic should be given in the morning, and in the evening from two to four teaspoonfuls of syrup of morphia, or one, two, or three centigrammes of this substance in injection. This treatment was employed upon a girl aged 23 years, who had been affected with chorea for two years, and who came into the hospital with a severe recrudescence of all the symptoms, accompanied also by hysterical manifestations. An emetic draught of 15 centigrammes of tartar-etic was prescribed, in the first instance, to be taken every five minutes; also a hypodermic injection of one centigramme of hydrochlorate of morphia, and an enema with four grains of bromide of potassium. The vomiting was copious; the second morning, the choreic movements had greatly diminished. The treatment was repeated two days afterwards, then at variable intervals; and the same improvement always occurred. The patient left the hospital, not cured, for her chorea seemed to become chronic, but much improved. M. Malherbe quotes this case because it clearly shows the powerful action of tartar-etic on the choreic spasms. It was never necessary to administer the medicine for several days in succession. He also quotes the case of a young girl, in whom, notwithstanding the means employed, the disorder of the muscles had arrived at such a stage of violence that he had given directions to have a wadded case made to preserve the patient from the danger of external concussions. Two emetic doses of tartar-etic, given at forty-eight hours' interval, assisted by large doses of morphia, seemed to have no effect; while, after a third emetic, a considerable soothing took place, and, at the end of three days, all choreic movement had disappeared.

19. *Tanret and others on Solutions of Caffeine for Hypodermic Injections.*—At a recent meeting of the Société de Thérapeutique in Paris (*Gaz. Hebdom. de Méd.*, Jan. 6, 1882), M. Tanret read a paper on this subject. He said that pure caffeine requires 93 times its weight of water for complete solution; therefore, up to the present time, it has not been generally employed in subcutaneous injections, one cubic centimetre of the liquid only containing little more than one centigramme of the active principle. The majority of the salts of caffeine proposed with this object, the acetate, valerianate, and lactate, become decomposed, in the presence of water, into free acid and caffeine, which is precipitated in consequence of its low degree of solubility. The salts containing mineral acids, sulphate, hydrochlorate, and hydrobromate, have little stability, and do not

offer any advantage. M. Tanret has endeavoured to obtain a salt of caffeine by means of the chlorogenic acid which is associated with it in coffee, as Payen has demonstrated; unfortunately, the preparation of this salt is difficult and laborious. Since then, he has had recourse to similar acids, such as benzoic, cinnamic, and salicylic. He has thus been able to obtain double salts of caffeine and soda, having the advantage of being soluble in somewhat larger proportions, and having a constant composition. With double benzoate of caffeine and soda, a solution is prepared containing 20 centigrammes of alkaloid in a cubic centimetre; the solution of double salicylate contains from 25 to 30 centigrammes to the cubic centimetre. The solutions of benzoate and salicylate are generally alkaline, and are neutralised by means of the corresponding acid. These salts, however, have no great stability, for they decompose when the solution is treated with chloroform; and the caffeine, less soluble than the salt itself, is precipitated. M. Vigier believed that it is in consequence of an analogous decomposition of salts of narcotine contained in opium, that, by means of chloroform, ether, or turpentine, the so-called free narcotine is obtained. It differs in no respect from the so-called combined narcotine, which is similarly extracted from raw opium during the preparation of morphia. M. Dujardin-Beaumetz had used double benzoate of soda and caffeine in two cases, one of diphtheria, and the other of choleraic symptoms. He did not find any irritating local action from the solution prepared by M. Tanret for hypodermic injections; but, as to the therapeutic value of the drug, he could not yet form an opinion. M. Féréol asked whether the double salts of caffeine, proposed by M. Tanret, could not be administered by the mouth. M. Tanret replied that he had no other object in preparing so concentrated a solution of caffeine but for subcutaneous injections, but the double salts which he had obtained might be given as a draught. It would be enough to prescribe the dose of caffeine required, and to add to it a sufficient quantity of benzoate or salicylate of soda to obtain the complete solution of the alkaloid. An extemporaneous preparation of the double salt, containing a known dose of caffeine, might thus be easily obtained.

20. *Vigier on the Solution of Alkaloids in Oil or Glycerine.*—At a recent meeting of the Société de Thérapeutique (*Gaz. Hebdom. de Méd.*, Jan. 6, 1882), M. Vigier pointed out the difference which exists, in a therapeutic point of view, between solutions of alkaloids in oil and in glycerine. It is true that the alkaloids dissolve more readily in glycerine; but, as scarcely any of this substance is absorbed by the skin, the preparation obtained is inert. On the contrary, oils dissolve alkaloids by means of the oleic acid in smaller quantity; but, the cutaneous absorption being more considerable, they yield much more manifest results.

21. *Stiles on Ergot in Lead-Palsy.*—Dr. Stiles of Belmont, Nevada, in a communication to the *Therap. Gaz. (Med. and Surg. Rep.)*, Nov. 19, 1881, states that about fifty per cent. of a physician's practice in his locality consists of lead-poison cases. The greater part of the male population is at work in the silver mines, and liable to be affected by the lead contained in the silver ore. Wrist-drop is a very frequent symptom, and paralysis of other forms—even hemiplegia or paraplegia—is not an unfrequent complication. The milder manifestations of these symptoms are usually removed in a few days by

a cathartic dose of Epsom salts, followed by iodide of potassium. Persons who abstain from alcohol, keep their bowels open, and lead regular lives, are much less liable to suffer from lead-poisoning. In hemiplegia and paraplegia due to lead-poisoning, Dr. Stites finds that the combination of ergot and iodide of potassium yields extremely satisfactory results. He prescribes the following :—R. Potassii iodidi, ʒij; extr. ergotæ, fl. ʒij; extr. nucis. vomicæ, fl. ʒij; tincturæ cardamomi comp., ʒij; syrapi, q. s.; aquam ad ʒiv. A tablespoonful is given night and morning. He prefers the above to the iodide alone, or electricity, or tonics and nux vomica. Power is usually restored in a month. Under other treatment, recovery does not take place under three months. The efficacy of ergot is attributed to its effect on non-striated muscular fibre. No danger attends the therapeutic application of the drug.

22. *Ergotine in Pharyngitis.*—*La Revue Mens. de Laryngol.* points out a therapeutic method which is capable of giving good results in chronic pharyngitis with exaggerated development of the veins of the pharynx and muco-purulent secretion. The following lotion should be profusely applied, twice a day, over the pharynx by means of a camel-hair pencil: Ergotine, 15 grains; tincture of iodine, 1 drachm; glycerine, 1 ounce.

23. *Riöpel on Collodion in Rheumatism.*—Dr. E. Riöpel of Detroit (*Med. and Surg. Rep.*, Oct. 1881) alleges that he has found very good results from the external application of caoutchouc collodion in rheumatism. The collodion is painted over the affected part or parts, and is allowed to remain there for several days.

24. *Porter on Eruption from Oil of Tansy.*—Dr. G. L. Porter of Bridgeport, Connecticut (*New England Med. Jour.*, Oct. 15, 1881), reports an eruption caused by the ingestion of a drachm and a half of oil of tansy for abortifacient purposes; it markedly resembled variola. From the fact that there was a remote possibility of the patient having been exposed to small-pox infection, it was thought possible that this disease was the cause of the eruption. The premonitory symptoms, clonic convulsions, and the course of the eruption, were against this theory. The matter was finally set at rest by the confession of the patient. The dose is one of the largest non-fatal doses of oil of tansy on record.

25. *Lewin and Rosenthal on the Form taken by Chrysarobin in External and Internal Use.*—These writers have sought to ascertain whether chrysarobin undergoes in the organism an oxidation into chrysophanic acid (Virchow's *Archiv*, Band lxxxv, Heft 1). As means of recognition of chrysophanic acid, they employ the colour of the urine which, during the use of substances containing that acid (such as rhubarb, senna), appears greenish-yellow and changes to cherry-red, when the urine becomes alkaline or when caustic soda is added. Chrysarobin, extracted from araroba powder by means of hot benzol, was administered with bread-crumbs to rabbits in doses of 1½ to 11 grains. On the following day, chrysophanic acid was proved distinctly present in both urine and fæces. That all the chrysarobin did not undergo transformation was proved by the fact that, in the course of the experiment, the rabbit got hæmaturia, a symptom never observed with pure chrysophanic acid. Only after fifteen days did the urine become free from albumen and chrysophanic acid. To test the change in external application, the writers shaved a considerable surface of a rabbit's skin, allowed any slight cutaneous lesions to heal, and then, with

a camel's-hair brush, rubbed in for several days an ointment of chrysarobin (1 to 15). The part was then covered up, and on the fourth day chrysophanic acid was found in the urine, while, on the eighth day the urine contained albumen, and the animal died. The kidneys showed parenchymatous nephritis. Thus, in both cases, the same partial transformation into chrysophanic acid seems to take place, while the remaining chrysarobin seems to have the power of producing nephritis.

26. *Ribbert on the Effect of Tannic Acid on Albuminuria.*—Having, by compression of the renal artery of the rabbit for an hour and a half, induced an artificial albuminuria, Dr. Ribbert slowly injected into the jugular vein two to three cubic centimetres of a five per cent. solution of tannic acid (*Centrab. für die Med. Wissen.*, No. 3, 1882). He then examined the excised kidney, and found that the coagulated fibrin in the Malpighian corpuscles was distinctly less than in those where no tannic acid was used. Finding that this solution of tannic acid frequently caused coagulation of the blood and death, he employed a solution of two per cent. tannic acid neutralised with carbonate of soda, and of this he injected 25 cubic centimetres without causing any serious symptom. The albumen was now completely absent in most of the glomeruli, and in the others there was but a very narrow zone. This experimental result supports the use of tannin, as recommended by Professor Frerichs in nephritis. Dr. Ribbert would recommend the use of tannin and of tannate of soda in larger doses than has been customary; and, more especially, he would advise that they should be used early in the disease, while still, as he holds, confined to the glomeruli.

27. *Gutmann on the Action and Use of Aspidospermine.*—Dr. Gutmann records (*Archiv für Experim. Pathol. und Pharmacol.*, Heft vi, p. 451) experiments with several preparations of this substance, the alkaloid of white quebracho bark. Four of these preparations were citrates, the fifth was the simple alkaloid. In frogs, the subcutaneous injection of 1-30th grain of the alkaloid caused distinct loss of voluntary power in the extremities, especially the posterior, going on to complete paralysis. The reflex action was less affected. To ascertain whether the effect was produced through the intramuscular terminations of the motor nerves, through the muscles, or through the central system, the common iliac artery and vein were tied; when it was found that the paralysis still followed, while also it was shown that muscular contractility was not diminished to direct faradic stimulation. The respiration was much retarded, probably the result of direct action on the respiratory centre, and ceased when paralysis was complete. The pulse sank from 38 to 15 in the half minute, a reduction which, it was shown by control experiments, was not due to the operation requisite for laying bare the heart. This result taking place in previously curarised frogs, Dr. Gutmann considers due, not to the action of the vagus, but to paralysis of the automatic cardiac ganglia. In rabbits, the respiration was not primarily affected, but the action on the heart was constant and characteristic, the pulsations sinking from 70 to 55 or 50 in the half minute. The temperature also fell, within an hour, 2 deg. to 2.7 deg. Cent. (3.6 to 4.8 Fahr.) Section of the vagi caused no increase in the frequency of the heart's beat. Sensation and motion were unaffected till death was near. Dr. Gutmann would, therefore, recommend aspidospermin in cases of cardiac neuroses and as

an antipyretic, for which last purpose cortex quebracho is used by the physicians of the Argentine Republic, where it is native. Dr. Gutmann calculates the minimum dose for an adult man as 18 grains. In a case of hemiepilepsy, by means of it he reduced the pulse from 80 to 60 per minute.

28. *Stadelmann on the Action of Toluylendiamin.*—Dr. Stadelmann has already detailed the results of his experiments with this drug on the dog (*Archiv für Experim. Pathol. und Pharmacol.*, Heft v, p. 287), results which may briefly be summed up in the statement that toluylendiamin, when administered to the dog, produces a well-marked 'absorption icterus'. He now gives the results of his experiments, with the same drug, on cats and rabbits (*Ibid.*, Heft vi, p. 422), and these, while interesting, are somewhat perplexing in the light of that already given. Administered to cats in doses of one to three grains, the drug, in 36 to 40 hours, produces an invariable and extremely marked hæmoglobinuria, while, in most cases, there is only the very slightest sign of icterus. When it is given to rabbits in repeated doses of seven grains, there is no hæmoglobinuria, and also very indefinite signs of icterus in a few cases. Although, in his experiments on cats, Dr. Stadelmann invariably found a few disintegrated blood-corpuscles in the urine, the condition was as different from hæmaturia as it well could be. The urine showed no trace of bile or bile-acids, but the secretion of bile in the liver and intestines was always free. The blood-serum contained a large amount of hæmoglobin dissolved in it. Dr. Stadelmann can offer no explanation of the apparent anomaly, discussing various theories only to reject them after experiment.

29. *Donath on the Physiological Effects and Chemical Reactions of Chinoline.*—This writer continues (*Berichte der Deutsch. Chem. Gesellsch.*, No. 14, 1881, p. 1769) his account of the properties of chinoline as an antipyretic and antiseptic. Using Buchholz's cultivating fluid (10 parts of sugar-candy, 1 part of tartrate of ammonia and half a part of phosphate of potash, in 100 parts of water), he found that a solution of chloride of chinoline effectually prevented the formation of bacteria. Also, a solution of even 0.2 per cent. prevents lactic acid fermentation; but, on the other hand, even 5.0 per cent. has little or no effect on yeast-fermentation. Quinine, also, in 2.0 per cent. solution, has no effect in preventing yeast-fermentation. Of the list of reactions of chinoline, the following may be mentioned. 1. With caustic potash, it falls milky white, with difficulty soluble in excess of potash; so, also, with carbonate of soda and ammonia. 2. With iodide of potassium and iodine (7 parts of the first to 5 of the second in 100 parts of water), it produces a reddish-brown precipitate, insoluble in hydrochloric acid. 3. With picric acid, it gives a yellow amorphous precipitate, soluble in alcohol and potash. 4. Mercury chloride gives a white flocculent precipitate readily soluble in hydrochloric acid. 5. Ferrocyanide of potassium colours the solution red, and, on addition of a mineral acid, a reddish-yellow precipitate falls. Experiments with chinoline have shown that it may be given in daily doses of 15 to 30 grains without bad effects, allowing, therefore, its use as an internal antiseptic. It has no such albumen-precipitating action as carbolic acid. Chinoline is not excreted in the urine as such, but is probably transformed into a piridincarbonic acid.

30. *Gnauck on the Action of Hyoscine.*—Following up his experiments on the action of hyoscyamine, Dr. Gnauck has sought to determine the action of hyoscine,

one of the elements of hyoscyamine (*Centralbl. für die Med. Wissensch.*, No. 45, 1881). His experiments were mainly performed on healthy individuals and on patients affected with nervous diseases. Commencing with small doses of iodide of hyoscine in healthy individuals, he found that hyoscine is tenfold stronger in its effects than hyoscyamine, approaching thus more nearly to atropine. The effects observed were cerebral oppression, vertigo, glimmering before the eyes, feeling of intoxication, thirst, nausea, acid taste, itching of skin and a feeling of heat, laboured and retarded respiration, reddening of the face, dilatation of the pupils, unsteadiness of gait and delirium—that is, the same symptoms as those from atropine and hyoscyamine, also exhaustion and sleep, as with hyoscyamine. In addition, however, there was also a retardation of the pulse even with large doses—a result not seen with atropine and hyoscyamine. This last symptom varied with the amount of the dose and the susceptibility of the individual. Even a very minute dose (1-600 grain) of hyoscine invariably produces some of its effects, and subcutaneously twice as powerfully as by the mouth. The interval elapsing is usually from 2 to 12 minutes, or slightly longer by the mouth, and the effect is very various in different individuals. The fall in the pulse is the first symptom to appear, the last to disappear, ranging from 8 to 20 beats. A slight reduction of the pulse appears in the beginning of the action of atropine and hyoscyamine, and with small doses; but this is quickly followed by paralysis of the terminal filaments of the vagus. Hyoscine probably causes the fall in the pulse by an irritation of these filaments; tropaic acid, the other element in hyoscyamine, therefore, having the power to alter its action. Dr. Gnauck promises to detail, at a future time, the results of experiments on patients affected with mental diseases.

31. *Beetz on Iodoform Insufflations in Laryngeal Phthisis.*—This writer (*Berl. Klin. Woch.*, No. 2, 1882) gives details as to his method of applying this remedy. Iodoform, finely powdered by rubbing up with ether, may be applied to the larynx by insufflation with so little irritation that the morphia at first added can very quickly be omitted. The amount used, 30 grains daily, in three or four applications, is not enough to cause toxic symptoms. To prevent, as far as possible, annoyance from the odour of the remedy, an inhalation of carbolic acid solution may be given before the insufflation; a proceeding which will also allow the more direct application of the remedy to the ulcerated surface, although Dr. Beetz has found the iodoform alone to succeed admirably.

JAMES ANDERSON, M.D.

MEDICINE.

RECENT PAPERS.

1. KINNICUTT.—Transient Albuminuria. (*New York Med. Record*, 1882, p. 17.)
2. CHARCOT.—The Phenomena Produced by the Application of the Galvanic Current to the Cranial Vault during the Hypnotic Lethargy of Hysteria. (*Prog. Méd.*, 1882, No. 2.)
3. WHITNEY.—Disease of the Pancreas. (*Boston Med. and Surg. Jour.*, Dec. 22, 1881.)
4. VARIOT.—Malarial Hepatitis. (*Le Prog. Méd.*, 1882, No. 3.)
5. DUMONT-PALLIER.—On Hypnotism. (*Le Prog. Méd.*, 1882, No. 3.)

6. NOTHNAGEL.—Physical Examination of the Fæces (*Zeitschr. für. Klin. Med.*, Band iii.)
7. TRIPIER.—Diarrhoea in Cancer of the Stomach. (*Lyon Méd.*, Oct. 16, 1881.)
8. MAYER.—Scarlatina with a High Temperature. (*Annales de Méd. d'Anvers.*)
9. LODI.—Acute Icterus from Partial Primary Atrophy of Liver. (*Rivista Clin. di Bologna*, March 1881.)
10. DU CASTEL.—An Epidemic of Ecthyma in a Small-Pox Ward. (*Jour. de Méd. et de Chir. Prat.*, Dec. 1881.)
11. VERGELY.—Angina Pectoris in its Relation with Diabetes. (*Bull. Gén. de Thérap.*)
12. MEUSNIER.—The Influence of Pneumo-Hydrothorax on the Course of Pulmonary Tuberculosis. (*Gaz. des Hôp.*, Sept. 24, 1881.)
13. FINNY.—Rheumatic Fever with Pericarditis and Hyperpyrexia treated by the Cooling Pack. (*Brit. Med. Jour.*, Dec. 1881.)
14. DENAND.—Forms of Fever in Tuberculosis. (*Jour. de Méd. et de Chir. Prat.*, Oct. 1881.)
15. WAGNER.—Occult Septicæmia. (*Deutsches Archiv für Klin. Med.*, Band xxviii.)
16. TRIPIER.—The Adult Cephalic Murmur in the Orbital Region. (*Revue de Méd.*, Oct. 1881.)
17. MAHOMED.—Direct Transfusion of Blood for Hæmorrhage in Typhoid Fever. (*Brit. Med. Jour.*, Dec. 1881.)
18. DE CASTRO.—Disease of the Bronchial Glands. (*Med. Times and Gaz.*, Dec. 1881.)
19. ANNINGSO.—Perforating Ulcer of the Stomach, leading to Medico-Legal Inquiry. (*Brit. Med. Jour.*, Dec. 1881, p. 982.)
20. FOOT.—Hicough Lasting Twenty-six Weeks. (*Ibid.*, Dec. 1881, p. 983.)
21. GRADENIGO.—Auscultation of the Eye. (*Gaz. Med. Italiana*, Oct. 29, 1881.)
22. SILVESTRI.—A Case of Intestinal Paralysis with Obstinate Constipation. (*Gaz. Med. Italiana*, Nov. 12, 1881.)
23. LYNCH.—The Differential Diagnosis of Cardiac and Pericardial Murmurs. (*Cincinnati Lancet and Clinic.*)

1. Kinnicutt on Transient Albuminuria.—Dr. Kinnicutt (*New York Med. Record*, 1882, No. i, p. 17) read a paper before the New York Academy of Medicine, in which he drew attention to the occurrence of transient albuminuria, to which attention had been directed by Gull, Johnson, Saundby, Moxon, and others. His own observations seemed to show that temporary albuminuria, as it occurs in children and adults in apparent health, may be traced, in a large number of instances, to a transient oxaluria or lithuria, and he suggested that the sequence of events in the causation of albuminuria is as follows: 1. The temporary presence of a large amount of imperfectly oxygenated matter in the circulation; 2. Disturbance of the general nervous system, in which the vaso-motor system of the kidney shares, or one confined to the vaso-motor system of the kidney in its elimination of these products of a faulty digestion; 3. A transient dilatation of the blood-vessels in the kidney, and a retardation of the blood-current in the glomerular vessels, with possibly consequent alteration in the functions of the glomerular epithelium, also of a temporary nature. In the discussion which followed, Dr. A. Jacobi said that he regarded these cases of albuminuria as due to a diseased state of the vessels analogous to purpura. Dr. W. H. Thompson had seen several cases of albuminuria in children dependent on malaria and cured by quinine. Dr. E. Bradley referred to cases of temporary albuminuria occurring in young persons addicted to the excessive use of cigarettes.

2. Charcot on the Phenomena produced by the Galvanic Current applied to the Cranial Vault dur-

ing the Hypnotic Lethargy of Hysteria.—M. Charcot (*Le Prog. Méd.*, 1882, No. 2), in a recent communication to the Biological Society of Paris, referred to his previous observations on the neuro-muscular excitability of hypnotised patients (*LONDON MEDICAL RECORD*, 1881, p. 221), and would now add to that description certain phenomena which indicated a superexcitability of the cerebral motor centres. He had found that when a galvanic current was applied to the side of the head of a patient in the state of hypnotic lethargy, it produced movements of the muscles on the opposite side of the body, whilst no such effect followed if the patient were aroused. Then movements occurred only at the opening or closing of the current. These phenomena had been observed in five patients.

3. Whitney on Disease of the Pancreas.—Dr. W. F. Whitney (*Boston Med. and Surg. Jour.*, Dec. 22, p. 592) presented a communication to the Suffolk District Medical Society, entitled, 'Four Cases of Disease of the Pancreas'. The first was a case of cancer in a widow, aged 55, who presented the symptoms of severe pain in the abdomen, diarrhoea with bloody stools, vomiting, and, later, constipation. Some months afterwards, a hard pulsating tumour could be felt in the left hypochondrium. The necropsy revealed cancer of the entire pancreas, with secondary deposits in the liver. The other three cases were of hæmorrhage into the organ. In the first case, the symptoms were all acute, and death followed rapidly. In the second, the patient, a man past middle life, suffered from 'colic' and 'jaundice'. He was very yellow, with epigastric pain, loss of appetite, and lassitude. The case terminated with symptoms of peritonitis. Near the centre of the pancreas, there was a wedge-shaped brownish-black nodule, and several smaller ones were situated in the head, and one in the tail. Microscopically, they showed the characters of infarctions. In the third case, there was extensive purulent infiltration and sloughing, 'resulting, probably, from hæmorrhage'. In the discussion which followed, Dr. Prince mentioned a case of hæmorrhage into the pancreas, which was characterised by collapse, cold sweats, tender and swollen abdomen, and pulselessness. At the necropsy, the head of the pancreas lay in a pool of pus, and there was evidence of recent hæmorrhage and peritonitis. One week before the attack, the patient had complained of severe abdominal pain after turning a somersault. [There is no mention of the state of the urine.—*Rep.*]

4. Variot on Malarial Hepatitis.—M. Variot (*Le Prog. Méd.*, No. 3, 1882) reports a case of liver-disease occurring in the ward of M. Reynaud, at La Charité Hospital. The patient, a woman aged 41, had been in South America, where she had suffered from malarial fevers; and, since her return to France, in 1881, had been troubled by frequent diarrhoea, vomiting sometimes after every meal, and, on two occasions, she had had an attack of jaundice, without, however, any special pain in the hypochondrium. On admission, she looked jaundiced; but her urine, though high-coloured, gave no green colour with iodine or nitric acid. She presented obvious physical signs of pulmonary phthisis; her liver extended for two finger-breadths below the costal border. The abdomen was a little distended. After death, extensive disease was found in the lungs. The liver weighed 78 ounces; it was of normal shape and smooth surface, yellow, slightly hard, but easily broken by the finger. Its cut surface was of the same yellow colour, but dotted with

brighter yellow spots of the size of a pea, and very confluent. The gall-bladder and ducts were healthy, and the latter quite permeable. The spleen was large and soft, weighing 10 ounces. On microscopic examination, the liver-cells were found to be very fatty and pigmented; there was considerable increase of connective tissue, no melanosis, properly so called, and no particular increase of the biliary ducts. [It seems very doubtful whether this can be fairly regarded as a case of malarial hepatitis.—*Rep.*]

5. *Dumontpallier on Hypnotism.*—M. Dumontpallier (*Le Prog. Méd.*, No. 3, 1882) brought before the Société de Biologie certain experiments made by him on a hysterical patient. During the hypnotic sleep, this patient did not present the phenomena of muscular superexcitability. Rendered cataleptic by opening the eyes, she became a sort of automaton, in whom certain groups of muscles might be made to contract by directing a fine jet of air by means of a small India-rubber apparatus upon the cranium; and it was possible to determine the relation of particular points on the cranium to particular muscular movements. M. Dumontpallier regarded the phenomena as reflex. In the discussion which followed, M. Charcot pointed out that this observation differed essentially from the class of phenomena he had brought before the society at its previous meeting. In his cases, there was always neuro-muscular superexcitability, a definite objective condition. His patients were in a state of lethargy, in itself fundamentally distinct from catalepsy, while the movements produced were only at the opening and (above all) at the closing of the current.

ROBERT SAUNDY, M.D.

6. *Nothnagel on the Physical Examination of the Fæces.*—This author considers the macroscopic and microscopic examination of human stools more important than the chemical, and has carried it out in 800 cases, arriving at certain results (*Zeitsch. für Klin. Medicin.*, Band iii), of which we give the following. 1. Small round scybalous masses are not necessarily the result of intestinal stricture, but may be caused by paralysis of the peristaltic action of the colon allowing their formation in the pouches of the colon. 2. The reaction is mostly alkaline, but in infantile diarrhœa, frequently acid. 3. The colour is not caused by bile-pigment, which is not found in normal stools, but is present in the greenish-yellow stools of children and in the yellow mucus particles seen in the stools of adults. 4. Various lime-salts are found microscopically in the stools, but none of clinical importance. 5. Undigested food is also found in the fæces. Starch-granules are rare, even where the food is a plentiful starch-diet. They occur in larger quantity, however, in the stools of convalescents from typhoid fever. Muscle-fibres are commoner than starch-granules, being evidently more difficult of digestion. 6. Mucus appears either as distinct masses or intimately mixed with the fæces, and detected only by the microscope. 7. Cylinder epithelium appears frequently; but round cells, such as are seen in the bronchial secretion, are comparatively rare. 8. Blood and the eggs of intestinal parasites appear frequently, the blood, although apparently fresh, being almost always disintegrated.

JAMES ANDERSON, M.D.

7. *Tripier on the Adult Cephalic Murmur in the Orbital Region.*—Tripier (*Revue de Méd.*, Oct. 1881) adds some new observations on this subject, which may be regarded as a supplement to his previous paper, an abstract of which appeared in the LONDON

MEDICAL RECORD for April 1881. Since the appearance of that paper he has had three cases of chlorosis, three of metrorrhagic anæmia, one (a male) of anæmia from frequent hæmatemesis, and one (also a male) with cachectic anæmia without apparent cause. The result of these new observations is that Tripier finds that the position of maximum intensity is not on the temples, but in the orbital region. His method is to cause the patient to close the eyelids, and then auscultate with the stethoscope on the globe of the eye, or directly, with a cloth between the patient's eye and the ear. The latter he finds more easy and useful than mediate auscultation. Tripier has seen no reason to modify his opinion that the murmur is not propagated from the heart, and he thinks that its position of greatest intensity points to the conclusion at which he previously arrived, viz., that the murmur is produced near the end of the internal carotid artery.

G. A. GIBSON, M.D.

8. *Mayer on Scarlatina with a High Temperature.*—M. Mayer publishes, in the *Annales de Méd. d'Anvers*, the report of a case in which he was called to see a patient whom he had chloroformed two days previously for the extraction of a tooth. He found an intense fever with an axillary temperature of 40 deg. Cent. (102 deg. Fahr.). From the evening to the next morning this patient had had severe lassitude, headache, and an intense pain in the throat. On the evening of the same day the temperature rose to 41.5 deg. Cent. (106.7 deg. Fahr.) and the pulse to 130. The next morning, after a very restless night, the temperature was 43 deg. Cent. (109.4 deg. Fahr.). Having the idea of an exanthematic action, and remembering cases in which hyperthermia had prevented the appearance of the exanthem, M. Mayer resolved to lower the temperature by the application of bladders containing ice. Cold baths could not be given, on account of the very great weakness of the patient. The neck and nape were therefore surrounded with these bladders; others were placed on the chest and the abdomen. The patient was at first relieved; the temperature fell to 42 deg. Cent. (107.6 deg. Fahr.); and, at his request, the ice was replaced with cold water. The temperature then rose to 43 deg. The ice was replaced, and during the night the thermometer fell again, to rise at the end of the following day to 43 deg. But at this moment the commencement of the eruption appeared, and gradually became characteristic, and the ice was finally stopped. The disease, though developing itself as a sharp attack of scarlatina, followed a normal course; the desquamation appeared about a fortnight later. As the reporter remarks, without the thermometer, of which the exactness was verified on this occasion, he would not have conceived all the exanthematic nature of the mischief, would not have justly valued the gravity of the disease, and would not have dared to apply with so much energy the refrigeration to which he attributes the successful termination of this dangerous affection.

9. *Lodi on Acute Icterus from partial Primary Atrophy of the Liver: Recovery.*—Dr. J. Lodi reports the following case in the *Rivista Clinica di Bologna*, March 1881. Angelo Magnoni, aged 42, of a strong constitution, had never suffered from a similar disease to that which Dr. Lodi records, and had always inhabited slightly malarious places. For some years, however, he superintended in the summer and autumn a rice plantation on the left bank of the Po; notwithstanding this, he had never had intermittent fever, and showed no sign of paludal poisoning.

In the beginning of October 1879, while he was superintending the rice-harvest, he was seized with a slight rigor throughout the body, headache, weakness, and want of appetite. He had to walk about a mile and a half to reach his home. The shivering soon ceased, and was not followed by great heat. During two days the patient did not feel anything else; the headache, weakness, and want of appetite increased. On the fourth day there was copious epistaxis, which recurred on the following day. Finally, he lost blood by vomiting and by stool, and became so weak that he was obliged to keep his bed. Being now called to see the patient, Dr. Lodi found a condition of coma, delirium, decided icterus, and cold skin, particularly in the extremities; the pulse was 66, respiration 16, temperature 36 Cent. (96.8 Fahr.) The lungs were healthy. There was a systolic murmur, having its maximum at the apex. The liver was greatly diminished in size; percussion showed its limit to be, on the left, at the level of the right edge of the sternum; the upper edge at the nipple-line under the seventh rib; below, it did not reach the edge of the false ribs by four centimètres (about 1½ inches). No portion of the liver could be found in the space between the umbilicus and the xiphoid apophysis. In percussing somewhat strongly the hepatic region referred to, the dulness terminated by becoming changed into an almost tympanic sound. On pressing the ribs from below upwards, the patient felt slight pain. The spleen was slightly enlarged. The urine contained biliary pigment in abundance, and traces of albumen and blood. The abdomen was slightly depressed, but revealed nothing abnormal on palpation or percussion. The patient was subjected to a stimulant treatment (wine, coffee, etc.) The symptoms, after having persisted for some days, diminished by degrees; the temperature increased, the brain became clear; the icterus and thirst, and the small size of the liver, continued still for some time. Soon the liver increased at the rate of 1 centimètre daily. In ten days it had recovered its normal dimensions. From that time Dr. Lodi lost sight of the patient, but three months afterwards he met him again in perfect health. Dr. Lodi makes the following remarks on this case. This man was profoundly icteric. This icterus had the clinical form of acute icterus, in consequence of the serious cerebral disturbance and the copious hæmorrhage which accompanied it, and also of the enormous diminution of the liver, and the swelling of the spleen. All the other viscera were healthy, and the patient had enjoyed excellent health up to the time of his illness. The idea of destruction of the liver, consecutive on cirrhosis by stasis or any other chronic affection of this viscera, could not be entertained. Dr. Lodi also rejects the idea that the case was one of catarrhal angiolocolitis, followed by consecutive atrophy of the liver, secondary acute hepatitis of calculous origin, primary hepatitis ending in suppuration, acute steatosis, or typhoid icterus; and concludes that there was therefore rapid atrophy of the hepatic parenchyma, accompanied with more or less fever. This disease is usually accompanied by serious cerebral and general disturbance. Graves, Griffin, Budd, Schnitzler, in Oppolzer's medical wards, and Bamberger, have published similar cases. More recently, Valdayer (Virchow's *Archiv*, Band xlii) and Klebs (*Handbuch der Path. Anat.*, Band i), in studying anatomical lesions of the liver in acute atrophy, have observed in the connective stroma of the hepatic acini, in the midst of a

mass of cells formed by the morbid processes, a formation of epithelial cells, which they both agree in taking for a regeneration of the hepatic tissue.

10. *Du Castel on an Epidemic of Ecthyma in a Small-Pox Ward*.—M. Du Castel (*Journ. de Méd. et de Chirurgie Pratiques*, Dec. 1881) observed this complication in the patients in the small-pox wards under his care at the Saint Antony Hospital. The ecthyma supervened either during the stage of desiccation or even that of suppuration. The ecthymatic eruption, sometimes discrete, sometimes confluent, chiefly occupied the anterior surface of the chest and the upper or lower limbs. It was also seen on the face; generally it showed itself in successive eruptions, sometimes preserving a mild character, sometimes, on the contrary, terminating in death. For a long time the men of the ward only showed numerous cases of ecthyma, but a majority of the convalescents were attacked by it. It was only after several months that the disease broke out in the women's ward, where it broke out with the same intensity. Before acknowledging its contagious nature, M. Du Castel waited for the development of the disease in other wards; but the isolation of the small-pox patients scarcely allowed contact with other wards. Nevertheless, the house-surgeon of the ward and a male nurse were attacked by ecthyma, localised in the one in the hand, and in the other in the feet, and probably produced by direct contact with the patients. His own and M. Vidal's experience has well demonstrated that ecthyma is inoculable. But it may be said in connection with inoculable ecthyma, that there is no doubt contagious and epidemic ecthyma; this variety would be so much the more important to recognise, because, when it finds a soil appropriate for its implanting, such as convalescent small-pox patients, it may become a serious and even mortal affection. The local treatment consisted in lotions of carbolised oil on the face, and lotions of mercurial sublimate over the rest of the body.

11. *Vergely on Angina Pectoris in its Relations with Diabetes*.—M. Vergely of Bordeaux read a memoir on this subject, at the meeting of the Académie de Médecine de Paris on Nov. 29 (reported in the *Bull. Gén. de Thérap.*), in which he postulated the following conclusions. 1. Attacks of angina pectoris may show themselves in the course of diabetes. 2. Attacks of angina pectoris may be simple or associated with intermittent neuralgia. 3. They may manifest themselves independently of any cardiac affection. 4. It is advisable, in presence of an attack of angina pectoris, to carefully examine the urine to make sure that this neurosis or neuralgia is not connected with diabetes.

12. *Meusnier on the Influence of Pneumo-hydrothorax upon the Course of Pulmonary Tuberculosis*.—Dr. Paul Meusnier of Blois communicates to the *Gaz. des Hôp.*, Sept. 24, 1881, a case of pulmonary tuberculosis, the progress of which he considers to have been retarded by the supervention of pneumo-hydrothorax. This fortunate result he attributes to the compression of the diseased lung, by which suppuration was limited and septic poisoning prevented. In July 1879, Dr. Meusnier first saw the patient, a young man aged 20, who had had phthisis a year. The disease was confined to the left lung, and had advanced to the stage of excavation. The general condition was bad, the cough incessant, and the expectoration purulent. Emaciation was extreme. A daily hectic paroxysm occurred. No change took place in the symptoms until September 27th, when, perforation of the lung occurred, and pneumo-hy-

drothorax was developed. After the disappearance of the dyspnoea and pain incident to the perforation of the lung, marked amelioration of all the symptoms was manifested. The cough and fever disappeared, and the general health improved. The patient gained three kilogrammes (six and a half pounds) every two weeks, and in February weighed more than ever before in his life. Improvement continued until May 1880, when, after exposure, the pleuritic effusion greatly increased. On June 8th, thoracentesis was performed, and two litres (three and a half pints) of pure serum withdrawn. The fluid reaccumulated, and assumed a purulent character. Septic fever now reappeared, and the patient died suddenly, before thoracentesis could be again resorted to. [See an abstract of a paper on the same subject by Dr. Hérard, in the LONDON MEDICAL RECORD for August 1881, p. 306.]

13. *Finny on Rheumatic Fever, with Pericarditis and Hyperpyrexia, treated by the Cooling Pack.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 932, Dr. J. Magee Finny reports a case where, after several days' treatment, a woman, aged 37, had a temperature of 107.2 deg., and a pulse of 136. The symptoms being urgent, she was gradually stripped, from above downwards; and towels, wrung out of iced water, were assiduously applied, one after another, first to the head and neck, then over the thorax and abdomen, and lastly over the thighs and legs. By the time the last cloth was applied, the first had become warm and was changed, and so on with each towel. In ten minutes the temperature fell to 103.8 deg., and the pulse to 120 deg. In a few hours the temperature was 100.4 deg.; pulse 92 deg.; and from that time the progress was uninterrupted, the pericarditis also rapidly disappearing. The chief interest of the case lays in the instantaneous relief afforded, by the cold applications, to severe symptoms attending the hyperpyrexia. The assiduous application of towels, wrung out in cold water, has many advantages over cold immersion. It can be done at once, and anywhere, and without assistance. It does not alarm either patients or friends, and is not attended with any fatigue to the patient, besides allowing the reduction of temperature and pulse to be more easily noted.

14. *Denand on Forms of Fever in Tuberculosis.*—M. Denand says (*Jour. de Méd. et de Chir. Pratiques*, Oct. 1881) that, in tuberculosis, there may be distinguished an invasion fever, a softening fever (*fièvre de ramollissement*), and an ultimate fever, due to the absorption of the septic products of the pulmonary cavities. The invasion fever is the most important with regard to diagnosis and treatment. It may be confounded with slight typhoid fever, with gastric affection, or with so-called growing fever in young persons. It is distinguished by its persistence, its irregularities, and its suspicious antecedents. There are differences, according to the form of phthisis which it accompanies. In acquired phthisis, the lungs show a remarkable intolerance of tuberculosis; the fever develops itself with intensity even before the local lesions may be taken notice of; it is acute and tenacious. The exacerbations more frequently occur in the morning or in the day. In acute phthisis, there is acute and persistent fever. Manifest remissions may sometimes simulate an intermittent fever. The febrile maxima show themselves frequently: in the morning the type is the reverse of that of the evening. In tubercle of the joints, there are present febrile symptoms, at more or less distant intervals from the outset, and there are frequent paroxysms

in the morning. It does not show that characteristic of continued persistence which is met with in the common forms; more or less prolonged disappearance, followed by sudden reappearance corresponding to the stage of softening, or to congestive accidents. Notwithstanding emaciation, patients frequently retain an animation and activity to which, in fact, the fever itself may, perhaps, contribute. In scrofulous phthisis, the fever is not very intense, and, during a great portion of the day, is non-existent; the exacerbations are moderate, and occur towards the evening. High temperature is very rare. Sulphate, or, better still, hydrobromate of quinine, is very suitable for the fever of invasion. It should be administered three hours before the febrile attack. Small doses, from 25 to 60 centigrammes (about 4 to 9 grains), should be administered at first; later on, from 0.60 centigrammes to a gramme (about 9 to 15½ grains) may be given; but then the quinine will act rather by removing the congestion of the lungs as a vaso-motor. Arsenic is a valuable antifebrile agent in the prolonged forms of the disease.

15. *Wagner on Occult Septicæmia.*—Leube, in 1878 (*Deutsch. Archiv für Klin. Med.*, Band xxviii, p. 521; and *Sädele Méd.*, Nov. 28, 1881), called attention to two cases of septicæmia, which he termed cryptogenetic; that is to say, of which the origin was unknown, or could not be discovered. These cases, which are confounded with the most various diseases, are not absolutely rare. Wunderlich, in 1857, described some cases as 'primary pyæmia'. Schützenberger of Strasburg spoke of cases of this kind to his pupils, and specially recommended minute examination of the hairy scalp in doubtful cases of acute fever. Professor Wagner reports 19 cases, of which some were really curious; and he also arrives at the same conclusions as his predecessors; that is, that septicæmia (or septico-pyæmia) exists, and is more frequent than is believed, but it is frequently mistaken in consequence of the ignorance of symptomatology. It is, therefore, the symptomatic description which is the weak point. It is formulated by Dr. Wagner as follows. 1. The general condition is serious. There is a febrile state, suddenly apparent, rarely preceded by a regular rigor, but attended with much shivering, and very often with severe rheumatoid pains of the bones and joints. 2. The patient experiences so much discomfort, that he is obliged to take to his bed at once, or, at the latest, after some days. 3. There is violent fever of the remittent or intermittent type, but always irregular. The exacerbations generally assume the aspect of a severe rigor. 4. The pulse is very frequent, generally dicrotic. 5. There is frequency of respiration, which cannot be explained by the mere elevation of the temperature, and which, in the majority of cases, is connected with serious affections of the lungs or pleura. 6. There is hypertrophy of the spleen, with scarcely any appreciable increase in the size of the liver. 7. There is more or less marked abdominal meteorism, often accompanied by intestinal borborygma, occasionally by frequent fluid stools. 8. There is moderate albuminuria, rarely tube-casts or blood-corpuses in the urine. 9. There is a pustular or papular cutaneous exanthema, with a hæmorrhagic base. 10. Icterus is rarely intense. 11. Subjective and objective symptoms are met with in the large articulations and the long bones, especially rheumatoid pains, occasionally attended with swelling or redness of the joints. 12. Serious cerebral symptoms occur, such as obnubilation, delirium, convulsions, and coma. 13. The progress of the affection

is rapid. 14. Medicinal treatment by quinine, the salicylates, etc., is unsuccessful. The affections with which septic-pyæmia may be confounded are, more especially, typhoid fever, of which the progress is very much less rapid and less tumultuous, and which is never accompanied by icterus or exanthema similar to those described, nor by joint-lesions; miliary tubercle, which it is almost impossible to diagnose; and epidemic cerebro-spinal meningitis, which presents, perhaps, still greater difficulties, since the rapidity of the progress, and the presence of an exanthem, can no longer be considered as means of diagnosis. In this case, inquiry must be made into the presence of an epidemic meningitis. The question is still further obscured by the fact that the wound, which theoretically should always be present, does not always exist, and that, in place of it, there may be internal suppuration, necessarily overlooked, because it does not give rise to any characteristic symptom. Finally, in a certain number of cases, rare, it is true, it has been absolutely impossible, notwithstanding the most minute researches, and notwithstanding the certainty that pyæmia existed, to find any starting-point. The question, therefore, remains obscure, notwithstanding its importance, and still requires much research.

16. *Tripier on Diarrhœa in Cancer of the Stomach.*—A paper by Dr. Tripier of Lyons (analysed in the *Lyon Méd.*, Oct. 16, 1881) is intended to show that the theories of Trousseau and Brintoris, on the method of production of diarrhœa in cancer of the stomach, are incapable of accounting for all the facts, and that the conditions under which diarrhœa is noted are very variable. He gives the following results of an analysis of 28 cases of cancer of the stomach in which there was a *post mortem* examination. In more than half of the cases, the patients had diarrhœa, which supervened sometimes at the outset of the disease, sometimes during its course, in a more or less transitory manner, but most often during the months preceding death. It may, also, only appear during the last days of the illness; in almost every case it alternates with constipation, or is consecutive on it. Diarrhœa is met with wherever the cancer may be located, whether the tumour be ulcerated or not, and even with a certain amount of stricture of the pylorus, whether there be any or no complications, but especially when the patients take a notable quantity of food. Constipation or abnormal motions may be observed in conditions apparently identical with those which produce the diarrhœa. Hence the diarrhœa in cancer of the stomach cannot actually be explained by a determinate anatomical condition. It therefore seems rational to suppose that it is most frequently produced through impaired function of the seriously diseased stomach, or by irritation, having for its starting-point gastric lesion, and of which the action makes itself felt on the various constituent portions, not only of the stomach, but of the whole digestive canal. The diet will be the determining cause. Diarrhœa may supervene at variable periods more or less distant from the termination of the disease, and even at its outset. Constipation is also probably produced by phenomena of irritation, but especially when the patients eat little or vomit what they eat. The pathogenesis of these various conditions cannot be indicated in a more precise manner than in the majority of cases of dyspepsia, in which we see sometimes constipation, sometimes diarrhœa; sometimes these troubles alternating, without their immediate cause being evident. Finally, there is also a

colliquative diarrhœa, of which the immediate causes are not thoroughly known. As diarrhœa is not only an ultimate symptom in cancer of the stomach, and as it may show itself at all periods of the disease, even when it is not distinctly characterised, errors of diagnosis may result from overlooking this clinical indication, and subsequently from attributing the assemblage of symptoms to some other disease in which diarrhœa plays an important part. M. Tripier, in confining his memoir to the facts he has observed, points out the possible confusion of cancer of the stomach, more especially with pulmonary tuberculosis, and incidentally with progressive anæmia and interstitial nephritis.

17. *Mahomed on Direct Transfusion of Blood for Hæmorrhage in the Course of Typhoid Fever.*—Dr. F. A. Mahomed relates, in the *Brit. Med. Jour.*, Dec. 1881, p. 939, two cases of typhoid fever in which transfusion of blood was performed. One lived five days, the other nine. Dr. Mahomed calculated that transfusion would save one in seventy cases. The mode preferred was that adopted by Dr. Aveling. An interesting discussion followed the reading of the cases, relative to the best instruments for transfusion.

18. *De Castro on Disease of the Bronchial Glands.*—Mr. James C. De Castro, speaking of some cases of this disease (*Med. Times and Gaz.*, Dec. 1881, p. 707) describes one where fatal hæmoptysis ensued from a suppurating gland, in which the coats of a rather large pulmonary vessel were involved. Three cases of disease of the glands are detailed, and give a very instructive view of these obscure, and often mistaken, affections.

19. *Anningson on Perforating Ulcer of Stomach leading to Medico-Legal Inquiry.*—Dr. Anningson reported to the Cambridge Medical Society (*Brit. Med. Jour.* Dec. 1881, p. 982) a case in which a man, aged 40, had died under suspicious circumstances. The corpse was exhumed one month subsequently to burial. The stomach was carefully spread out on a piece of glass, and the cause of death asserted to be ulcerative perforation of that organ. According to Virchow, the cause of such ulcers is a block in one of the gastric veins, depriving the part of nutrition.

20. *Foot on Hiccough lasting Twenty-six Weeks.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 983, Dr. A. W. Foot details the history of a lad, aged 15, whom he was called to see after he had been hiccoughing, without ceasing, except during sleep, from Nov. 5, 1880 to April 9th, 1881. The attack came on quite suddenly. He had previously suffered from shorter attacks on two occasions. A month's treatment with hemp and iodoform cured the patient. The average rate of the hiccoughing was 840 per hour, and it lasted, without intermission, except during sleep, for twenty-six weeks.

RICHARD NEALE, M.D.

21. *Gradenigo on Auscultation over the Eye.*—Professor Gradenigo (*Gaz. Med. Italiana*, Oct. 29, 1881) is induced to believe from experiments extending over some considerable time, that, in auscultation over the eye-ball, a means of clinical diagnosis exists which may become important. In his paper he describes and explains the sounds heard on auscultating over the orbit and globe. As a practical point he recommends the use of a stethoscope, *ad hoc*, consisting of an India-rubber tube attached to a wooden cone, shaped so as to fit exactly over the closed lids. The hand which steadies the instrument should also be covered with some non-conducting material, such as a glove or a piece of wadding.

22. *Silvestri on a Case of Intestinal Paralysis with Obstinate Constipation.*—The patient, whose case is described by Dr. R. Silvestri in the *Gaz. Med. Italiana*, Nov. 12, 1881, was a blacksmith, aged 62, who had previously at intervals suffered from obstinate constipation. During one of these attacks, two years before his death, there had been no movement of the bowels for ten days. On the present occasion, he exhibited no serious symptoms until the seventh day, when the pulse rose to over 100; the abdomen became slightly tympanitic, and pain was felt in the epigastric region. From this date until the ninth day, when he died, the attacks of pain became more intense and frequent; the urine was lessened in quantity, and vomiting, but not of faecal matter, was more or less constant. The necropsy showed that the viscera generally were healthy, save that the colon, at a point extending from the lower fifth of its transverse portion down to the rectum, was enormously dilated. Its walls were also considerably hypertrophied. This large cavity was distended with gas, but otherwise empty. The diseased portion was distinctly marked off from the healthy, both by an increased thickness of tissue and by a redder tint. The proximate cause of death was considered to be acute peritonitis, due to check in the faecal circulation. This was itself caused by paralysis of the descending colon, the result of chronic inflammation of that viscus. This diagnosis was confirmed by the mildness and subacute character of the symptoms during the first days of the attack, and by the absence of any tumour, of tympanites, or of acute pain. Should the author meet with and recognise a similar case during life, he considers that treatment by means of electricity would probably afford the most satisfactory results. One reophore should be placed on the false ribs of the left side, the other in the rectum. L. FORBES.

23. *Lynch on the Differential Diagnosis of Cardiac and Pericardial Murmurs.*—At a meeting of the Medical and Chirurgical Society of the State of Maryland (*Cincinnati Lancet and Clinic*) Dr. J. Lynch presented a paper in which he gave a new point in the differential diagnosis of cardiac and pericardial murmurs. The following paragraph explains his method. 'Whenever the friction-murmur is produced at or near the heart's apex (the only condition in which there will be any serious difficulty in the diagnosis), if we cause the patient gradually and slowly, but entirely, to inflate the lungs, we will perceive that the friction murmur becomes progressively more intense until the act of insufflation is complete. Now make the patient hold his breath while the lungs are in this state of complete insufflation, and the murmur will be steadily maintained at its maximum intensity. Cause him then to expire in a like slow and gradual manner, and the murmur will be found to decline in intensity until the minimum will be reached at the completion of the expiratory act, at which it will be maintained until another inspiration increases its intensity. The murmur does not entirely disappear, however. It is present at all stages of respiration, but always presenting the variation in its intensity.'

SURGERY.

RECENT PAPERS.

1. SURIS.—Peritoneal Surgery. (*Brit. Med. Jour.*, Dec. 1881, pp. 925, 971.)
2. SHUTTLEWORTH.—A Case of Multiple Exostoses. (*Ibid.*, p. 976.)
3. NORTON.—A New and Reliable Operation for Webbed Fingers. (*Ibid.*, p. 931.)
4. REEVES.—Mid-Femoral Osteotomy for Knock-Knees and Bow-Legs. (*Ibid.*, p. 935.)
5. HAYES.—Radical Cure of Hydrocele by Iodoform. (*Ibid.*, p. 936.)
6. HARRISON.—Tapping the Bladder through the Prostate. (*Ibid.*, p. 1010.)
7. MAIN.—Antiseptic Surgery. (*Ibid.*, p. 1013.)
8. HAHN.—Operative Treatment of Floating Kidney by Fixation. (*Centralbl. für Chir.*, 1881, No. 29.)
9. HEWSON.—The Treatment of Whitlow. (*Coll. and Clin. Record.*)
10. LE DENTU.—Stretching the Lingual Nerve in Tic Douloureux. (*Jour. de Méd. et de Chir. Prat.*, Dec. 1881.)
11. LE DENTU.—Case of Large Hydronephrosis: Incision: Urinary Fistula: Extirpation of Kidney. (*L'Union Méd.*, Nov. 17.)
12. HERRICK.—Lupus Exedens successfully treated by Creasote and Calomel. (*Med. Annals.*)
13. HEATH, W. H.—The Heatonian Method for the Cure of Hernia. (*Buffalo Med. and Surg. Jour.*, April 1881.)
14. GRAYHILL.—Symmetrical Spontaneous Gangrene in a Child. (*Virginia Med. Monthly*, Aug. 1881.)
15. BYRD.—Ulceration and Perforation of the Vermiform Appendix treated by Abdominal Section. (*Virginia Med. Monthly*, Aug. 1881.)
16. DEMONO and POLAILLON.—Modified Tibio-Tarsal Resection in certain Cases of Compound Fracture of the Ankle. (*Bull. de l'Acad. de Méd. de Paris.*)
17. CORAZZI.—A Case of Herniotomy in Simulated Hernia. (*Gaz. Med. Ital.*, Nov. 12, 1881.)
18. GALLARDO.—Suborbital Neurotomy. (*Siglo Med.*, Nov. 21, 1881.)
19. SACERDOTI.—Rupture of Bladder and Urethra successfully Treated by External Urethrotomy. (*Gaz. Med. Ital. Prov. Ven.*, Nov. 19.)
20. MAROCCO.—Treatment of Specific Inguinal Adenitis. (*Ibid.*, Dec. 3.)

1. *Sims on Peritoneal Surgery.*—Dr. J. Marion Sims, in the *Brit. Med. Jour.*, Dec. 1881, pp. 925, 971, gives some admirable remarks upon this subject, especially in reference to gun-shot wounds, in order to answer the pressing question, 'Does the recent progress of peritoneal surgery lead to a better treatment of gun-shot wounds of the abdomen?' Ovariectomy is the parent of peritoneal surgery, and the principles necessary to success in all peritoneal operations were formulated by Mr. Spencer Wells at the late International Congress, thus: 1. All hæmorrhages must be promptly controlled by pressure, ligature, or hæmostatic forceps; 2. The peritoneal cavity must be thoroughly cleansed after operation, before closing the abdominal incision; 3. The abdominal incision must be properly closed. Dr. Sims, after reviewing all the operations requiring abdominal section, expresses his belief that the day will soon come when, in all gun-shot wounds, and in all cases of perforation of the bowels from ulcers and other causes, we shall not hesitate, under proper conditions, to open the abdomen, clean out the peritoneal cavity, pare the edges of the wound, and bring them together with sutures, treating the case

DR. KIMDRAT of Graz has been appointed Professor of Pathology in the University of Vienna, in the room of the late Professor Heschl.

PROFESSOR PANUM has been chosen to preside at the next meeting of the International Medical Congress, which will be held in Copenhagen.

as we now treat other cases of wounded peritoneum. Lives may thus be saved that must otherwise quickly ebb away.

2. *Shuttleworth on a case of Multiple Exostoses.*—Dr. G. E. Shuttleworth, in the *Brit. Med. Jour.*, Dec. 1881, p. 976, reports the remarkable case of an imbecile lad, aged 13, in whom at least sixty growths from, and enlargements of, bones in different parts of his body could be counted. A tabular view of the two sides of the body is given, and, in many instances, the symmetrical development of the growths is most marked.

3. *Norton on a New and Reliable Operation for Webbed Fingers.*—Mr. Arthur A. Norton, in the *Brit. Med. Jour.*, Dec. 1881, p. 931, illustrates, with a plate, the operation he has found to succeed in cases of webbed fingers. As it can only be understood by a reference to such plate, we must refer our readers to the original article. By the means suggested, Mr. Norton asserts that this, which is one of the most troublesome and unsuccessful of operations, is converted into one of the most simple and most certain of success.

4. *Reeves on Mid-Femoral Osteotomy for Knock-Knees and Bow-Legs.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 935, Mr. H. A. Reeves describes the seventh of a series of cases in which he has divided the femoral shaft just below its middle, and easily corrected serious deformities arising from knock-knees and bow-legs. Mr. Reeves prefers this operation for the following reasons. 1. The bone is divided in its narrowest part, and, therefore, the operation is most easily done. 2. The deformity is easily corrected, and a large ugly-looking callus avoided above the joint, a necessary result of supracondyloid osteotomy. 3. The effusion into the joint, frequently following this latter mode of operating, is avoided. 4. Recovery is more rapid, because the extent of injury requiring repair is reduced to its minimum. 5. Frequent repetitions of osteotomy are done away with; the section in the middle of the bone, at the point of junction of the two curves, correcting the double deformity of knock-knee and bow-leg. Mr. Reeves performs 97 per cent. of his osteotomies without antiseptic precautions.

5. *Hayes on Radical Cure of Hydrocele by Iodoform.*—Mr. P. J. Hayes speaks most favourably of the results when iodoform is passed into the sac after the fluid is removed (*Brit. Med. Jour.*, Dec. 1881, p. 936). But little pain is experienced, and the patient need not be confined to his room.

6. *Harrison on Tapping the Bladder through the Prostate.*—Mr. Reginald Harrison, in the *Brit. Med. Jour.*, Dec. 1881, p. 1010, describes an operation that he has found most valuable in some exceptional cases of retention due to hypertrophy of the prostate. A special trocar and cannula is required, and is introduced in the median line of the perinæum, three-quarters of an inch in front of the anus, and pushed steadily through the prostate into the bladder. A piece of India-rubber tubing is then attached to the cannula, to convey the urine into a vessel during sleep, which tubing, during waking hours, is clamped, and only loosened when the patient needs to micturate.

7. *Main on Antiseptic Surgery.*—Dr. Wm. Main, in the *Brit. Med. Jour.*, Dec. 1881, p. 1013, recurs to the now much debated question as to the use of the spray. Dr. Main suggests that the carbolic acid does not act by destroying the vitality of the germs, experiments proving that bacteria will thrive in very strong solutions of carbolic acid, but that the current

created blows them away from the wound, and that, therefore, the force of this current should be lateral to drive germs away from, and not directed from the front so as to drive germs into, the wound.

RICHARD NEALE, M.D.

8. *Hahn on the Operative Treatment of Floating Kidney by Fixation.*—Considering that the extirpation of the kidney is in itself a serious operation, and that, moreover, by the removal of the one kidney an increased function is thrown on the other possibly defective kidney, surgeons will welcome the new method recommended by the above writer (*Centralb. für Chir.*, 1881, No. 29). He has already practised it in two cases of floating kidney (the right in both cases), completely relieving all symptoms in one case, and greatly alleviating the other, where the left kidney was also slightly movable. The patient lying on his left side, a vertical incision is made along the outer edge of the erector spinæ from the twelfth rib to the crest of the ilium, dividing the latissimus dorsi and quadratus lumborum muscles. The kidney, in its fatty capsule, is then pressed from the abdominal side into the wound, and there fixed with six to eight catgut sutures. Both cases recovered without a bad symptom. Since in both cases the kidney became, after a time, again slightly movable, the operator recommends that the fatty capsule should be opened, separated from the kidney, and firmly sutured into the wound, while, also, the kidney should be fixed as low down as it can possibly be drawn.

JAMES ANDERSON, M.D.

9. *Hewson on the Treatment of Whitlow.*—Dr. Addinell Hewson offers some suggestions for the accurate diagnosis and successful treatment of whitlow (*Coll. and Clin. Record*). For diagnosis, he makes a flattened conical tube of binder's board, with its base $5 \times 3\frac{1}{2}$ inches in diameter, so trimmed as to fit closely over brow, cheeks, and upper lip. The length is such as to bring the apex at about the distance of the range of distinct vision. The apex is an orifice $\frac{1}{8} \times \frac{3}{16}$ inch in diameter. The tube is made from a sheet of binder's board, by dipping in warm water to soften it, then rolling it diagonally, and wrapping with cord to retain form until dry. By means of this simple apparatus he examines the tissues by transmitted light. In the case of a suspected whitlow, the patient's finger is brought to the point of the tube, which is held in the direction of a bright light, either natural or artificial, while the face is so applied at the base as to make it fit closely and exclude the light. During the examination, Dr. Hewson finds it of advantage to have the patient practice forced, rapid respiration, to produce an anæsthetic effect. If the apex of the tube cover healthy tissues of the finger, the characteristic bright pinkish-red colour is readily perceived; while, if the tissues be engorged, the darker red tint, deepened in proportion to the intensity of the engorgement, will be equally characteristic, and will form a marked contrast to the colour to be seen on examining the corresponding finger on the other hand. If the tint, though still reddish, be a yellow hue, pus has formed in the cellular tissue around, or in the theca of the tendon. If by making firmer pressure, so as to cut off the lateral illumination through the tissues, the tint be found to be of a positive yellow, it is evident that there is suppuration in the theca of the tendon. Finally, if the tint so transmitted be of a dirty or opaque yellow, the bone or periosteum is the seat of purulent formation and collection. When such examination demonstrates that pus has not yet formed, he has generally succeeded in aborting a whitlow by

the application of a thick paste of wet clay, covered first with tissue paper, and then with a thin layer of bandage stiffened by liquid glue painted in strips lengthwise on each side of the finger. The object of applying the glue thus, instead of covering the whole surface, is to allow the drying of the clay, which would be prevented by coating the whole surface with glue. Dr. Hewson's experience with such uses of clay has been very extensive, and he reports some very interesting and valuable results obtained by this agent. In this class of cases here considered, he finds that, as a rule, the relief is very prompt, in which case the dressing is allowed to remain for several days. When the pain is not relieved in two or three hours after the application of the earth, he removes it at once, and makes a free incision, as he feels sure that nothing else will arrest the process.

10. *Le Dentu on Stretching the Lingual Nerve in a Case of Tic-Douloureux.*—M. Le Dentu (*Jour. de Méd. et de Chir. Pratiques*, Dec. 1881) has performed stretching of the inferior lingual nerve in an elderly female, who for several years had an extremely violent tic-douloureux of the face. The pain ceased rapidly, and has not since re-appeared. The traction on the nerve was moderate; for, on the one hand, serious trophic troubles might be expected to follow the operation, and, on the other hand, M. Charcot has related a case in which death rapidly supervened.

11. *Le Dentu on a Case of Large Hydronephrosis: Incision: Urinary Fistula in the Groin: Extirpation of the Kidney.*—M. Le Dentu read recently (*L'Union Méd.*, Nov. 17) a paper to the Paris Academy of Medicine, in which he related that in March 1875 he was called to a man aged 22, who had a fluctuating swelling of the flank and of the iliac fossi of the left side. There were hydronephroses and perinephritic abscess. The acute suffering of the patient decided M. Le Dentu to make an incision in the swelling at its softest point. A clear liquid escaped from it, which soon became mixed with blood. At the end of some days, urine began to flow abundantly from the wound. This flow persisting, and frequently bringing on inflammatory outbreaks, and the patient's life being in danger, M. Le Dentu proposed extirpation of the corresponding kidney. The operation was performed on April 14th. The kidney, which was easily removed from its capsule, had become degenerated in the upper two thirds, and converted into a pouch with flaccid walls. It was normal in the lower third; the hilus was enlarged. A catgut ligature was applied over the healthy portion of the kidney, and a second ligature was placed in a convenient situation, by means of a Cooper's needle, and drawn tight by forceps. M. Le Dentu excised with scissors all the portion which lay beyond the ligatures, leaving a sort of stump. Lister's dressing was used during some days, until the parts which had sloughed through the application of the ligature and the thermo-cautery were eliminated. The patient was very weak, with pulse between 120 and 145; temperature, 38 to 39.5 cent. (100.4 deg. to 103.1 deg. Fahr.) The lumbar wound progressed regularly towards cicatrisation, which was complete at the end of two months. The fistula in the groin, which M. Le Dentu had slit up and enlarged with the galvanic cautery, suppurated profusely during a fortnight; but, from the first day, the flow of urine was entirely suppressed. So far, the cure was completed at once. At the time when the case was reported, the fistulous track, in which M. Le Dentu had kept a drainage-tube, only yielded a few drops

of purulent serosity; the urinary functions were perfect, and the patient, a distinguished dramatic artist, was able to make a brilliant reappearance at the commencement of October. The first nephrectomy ever performed in France was done by M. Le Fort, and was unsuccessful. This case of M. Le Dentu's is the first instance of cure by nephrectomy recorded in France.

12. *Herrick on Lupus Exedens Successfully Treated by Creosote and Calomel.*—Dr. Clinton B. Herrick reports the following case in the *Medical Annals*. P. S., aged 65, was admitted into the Albany Hospital (service of Dr. A. Van Derveer) October 21, 1880, with the following history. There was no trace of disease of an ulcerative nature in his family. About fifteen years previously, the patient first noticed a small wart, about the size of the head of a pin, in the front of the left ear. It remained about the same for a period of five years; then it began to be a little sore, and, if scratched, would bleed, a scab forming afterwards. He also noticed then that a small ulcer was progressing, which increased and spread downward, and then toward his eye, the ulcer healing and crusting over in its track. The character of the sore was in form irregular, without discharge, up to this time, and painless; being accompanied, however, with an intense itching sensation, so great sometimes that the patient could scarcely control himself. The disease advanced, surrounded the eye, implicated the lids, and crept on over the left side of the nose down to the alæ, and a portion on the right side. About three months before coming into hospital, the ulcer began to discharge very profusely a thin purulent matter. When admitted, the disease covered almost entirely the upper half of the left side of the face. At first, creosote alone was applied, then dichloroacetic acid was used with some benefit. Then applications were made of creosote and calomel, and from the first use of it the ulcer began to improve. The method of using it was to take a camel's hair pencil, dip it first in the creosote, then in dry powder of calomel, applying it to the edges and where depressions existed, the brush with a twirling motion dislodging and removing the cells. Under this treatment, the surface glazed over with healthy skin, its size diminished, and at the time of the report there only remained a small portion of the disease over the eyelids, without any indications of returning.

13. *Heath on the Heatonian Method for the Radical Cure of Hernia.*—Dr. W. H. Heath (*Buffalo Med. and Surg. Jour.*, April 1881) says that the radical cure of hernia has in all ages attracted the attention of surgeons, but hitherto without the success the importance of the cure would lead us to hope. All of the older methods have justly fallen into disrepute, and no sound surgeon would practice either of them with any confidence. Accordingly, the Heatonian method may be considered more hopeful for these reasons: 1. The almost complete absence of danger; 2. The great encouragement held out by the results; 3. Its sound pathology. This operation has not been in the hands of the profession more than four years; and it is well known that the inventor was ostracised by the profession for keeping his discovery a secret, but to do him justice it should be stated that he originally intended to make his discovery common property, but was so ill treated by those whom he invited to witness some of his operations, that in his disgust he determined to keep his method of cure to himself. The pathology of this operation consists in developing by the action

of an irritant, which is also an astringent, a tendinous irritation, causing a contraction of the fibrous tissues and rings, which the circular arrangements of the fibres makes possible, and the formation of strongly plastic lymph. It being recognised that the fibrous structures and rings are the tissues primarily and principally at fault, to these alone is the remedy addressed. The reason why the irritation set up in the inguinal canal is not so serious as to be dangerous is this. The structures are not vascular to an extent that would render the irritation likely to communicate itself to the peritoneum. The irritant is mild, consisting of the fluid extract of *quercus alba*, prepared *in vacuo*, to which is added the solid extract of the same tree at the rate of 28 grains to the fluid ounce, and morphia to lessen the pain; and the operation is subcutaneous. The permanency of the effect is due to the interstitial and hyperplastic changes, and to the disposition of fibrous tissues to recover slowly. The instrument used is a device of Dr. De Garmo, being a 20-minim syringe, having a screw piston to deposit the contents gradually, and a trochar-needle, by which its point is guarded while in the inguinal canal. Stronger solutions may be used in cases of very old hernia, and very patulous canals. For the operation, the patient, having had the bowels moved by oil the day previously, is placed in bed, and the hernia and sac, if possible, reduced. The presence of the sac does not prevent a successful result, but it does diminish the effect. The operation consists in determining the exact position of the external abdominal ring, by invaginating a finger of the right hand in the scrotum, and fixing its position on the exterior by a finger of the other hand, which is made to press directly down upon it, or, if possible, in it. The instrument already prepared is carried with a sharp thrust quickly through the integument, just passing the external pillar of the ring; the needle then guarded is carried on into the canal, care being exercised not to injure the spermatic cord, or penetrate into the peritoneal cavity. The position of the point of the instrument should now be verified by the finger invaginated through the scrotum, and the irritant should be deposited as the syringe is withdrawn, all the fibrous structures being wet. A bandage and compress previously applied should now be carefully adjusted in the proper position, and so arranged that the compress shall bear with considerable firmness in the direction of the canal, with greater pressure over the external than over the internal ring. But little pain follows the injection. Tenderness exists in some degree for a time, but not enough to require removal of the compress. The recumbent position for a week and strict confinement of the bowels must be insisted on, for the hernia should not be allowed to descend after the operation. The bandage or a light truss should be insisted on for a month; after that, the truss may be removed, and the case considered cured. In a certain number of cases, the operation will have to be repeated where the canal is large and patulous, or where the hernia is the result of violence, and has torn away one or both rings; or again, in congenital hernia, where there seems to be a deficiency of fibrous structure. This operation, though simple, requires considerable care and dexterity. The spermatic cord may partially overlie the sac, which may be irreducible. The direction of the canal and the position of the internal ring may be changed. The possibility of transfixing one of the pillars, of wounding the spermatic cord, or of entering the abdominal cavity, are all to be remembered and avoided. Attention to

every detail in operating, adjusting the compress and bandage, and the after-care, are so important as to largely determine the result in most cases. A little time in the dissecting-room with a long needle will serve to familiarise the beginner with the points to find and to avoid. The author has operated twelve times with one failure and one accident. Nine cases were permanently cured, and two cases were still under observation.

14. *Grayhill on Symmetrical Spontaneous Gangrene in a Young Child.*—Dr. Grayhill, of Amsterdam, Virginia, reports a case of gangrene occurring in both legs of a young child, aged 2½ years, during convalescence from a mild attack of scarlatina (*Virginia Med. Monthly*, Aug. 1881). The mother had been carrying him around, holding him by the legs and thighs, and, when she sat him down, he began to cry and complain of his legs. By evening he was very fretful, and the legs and feet were swollen and discoloured, so that the physician was called. He found both legs and feet swollen and discoloured up to within two or three inches of the knee-joint; cool, and very sensitive to the touch. A week later, lines of demarcation were visible, and a cadaverous odour was noticeable. Sloughing was complete in four weeks, symptoms of pyæmia having developed once only, and for a few days, during the time. The bones were now taken off, and in four months the child was perfectly well. The treatment was tonic, stimulant, and disinfectant. The cause was supposed to be embolism.

15. *Byrd on Ulceration and Perforation of the Vermiform Appendix Treated by Abdominal Section.*—Dr. William A. Byrd, of Illinois, who advocated the above-mentioned treatment in a paper read before the American Medical Association in 1880, reported an interesting case of the kind at last year's meeting (*Virginia Med. Monthly*, Aug. 1881). The patient, a married woman, had been suffering symptoms of obstruction and suppuration for several days before Dr. Byrd saw her, the difficulty having begun nine days previously, with colic pains in the region of the cæcum. When he saw her, March 27, he diagnosed inflammation and obstruction of the bowel at the cæcum; but, as she was now a little easier, he was not allowed to operate until April 1. The cæcum and appendix were inflamed and ulcerated throughout, with several perforations and adhesions, the cause for which condition appeared to be several hard concretions found in the abscess-cavity. The perforations were all cut into a single opening, the edges of which were stitched to the opening in the abdominal walls, making an artificial anus about three inches in diameter. An opening was left at the side, through which the abdominal cavity was washed every few hours during the treatment of the case, with a very weak solution of carbolic acid. The usual hygienic, quieting, and supporting treatment was given; and, at the time of the report, one month later, she had been improving, with promise of being entirely well in a short time. This was Dr. Byrd's twenty-second abdominal section, the fourth in which he also opened into the bowel, all the latter resulting in cure. He gives much credit to the washing out of the peritoneal cavity, and to the artificial anus. He insists that the operation should be done before inflammation sets in.

16. *Demons and Polaillon on Modified Tibio-Tarsal Resection in Certain Cases of Compound Fracture of the Ankle.*—At a recent meeting of the Paris Académie de Médecine, M. Polaillon read a report on a case of M. Demons, surgeon to the Saint

André Hospital of Bourdeaux, who reported that he had performed a similar operation to that communicated by M. Polaillon to the Academy at their meeting of September 20th. The case was one of fracture of the two bones of the left leg, near the tibio-tarsal joint. There was a transverse wound at the level of the inner malleolus. The articulation was opened, the inner malleolus torn away; the upper fragment of the tibia projected through the wound; the fibula was fractured two finger-breadths above the outer malleolus; the foot was turned outwards. M. Demons performed tibio-tarsal resection. The articulation was opened widely by an incision made along the lower extremity of the tibia. He detached and completely removed the fractured tip of the internal malleolus, and then resected the upper fragment of the tibia. He afterwards made a vertical incision along the fibula, and resected the two fragments, leaving the outer malleolus *in situ*. The astragalus was intact. The upper cartilaginous layer was removed with the scissors and mallet. Lister's dressings and immobilisation were employed. The patient was cured, his foot was straight and firm; there is only a tendency to turn the foot on the outer edge in walking. M. Polaillon acknowledged that M. Demons' operation was anterior to his; but the priority, in reality, must be referred to M. Richet; and, perhaps, if all the cases of tibio-tarsal resection published in France and other countries were analysed, it would be found that before M. Richet, some other surgeon, finding the peroneal malleolus intact, had conceived and executed the project of leaving it attached to the astragalus; but this conception, if it had existed, had not been generally made known until M. Richet put it into practice in 1874. M. Polaillon further remarked that M. Demons' case was of extreme interest, because it confirmed the utility of the preservation of the external malleolus in resection of the lower extremity of the two bones of the leg.

17. *Corazzi on a Case of Herniotomy in Simulated Hernia*.—Dr. Lodovico Corazzi describes, in the *Gaz. Med. Italiana*, Nov. 12, 1881, the case of a woman aged 63, who, before coming under his care, had already, for fourteen years, been the subject of an inguinal hernia on the right side. Without any apparent cause, this suddenly exhibited signs of strangulation, which did not decrease even after the hernia had apparently been reduced by taxis. The sac was, therefore, opened; but, even after this, reduction could not be effected. Uncertain whether or not he had reached the intestine, Dr. Corazzi continued his incisions, with the final result of giving exit to a quantity of fluid and gas. These he took to be the contents of the intestine itself, which he supposed he had wounded; and further operative interference was, therefore, desisted from. The necropsy, made a few hours after death, revealed, instead of strangulation, a perforation of the small intestine about two yards above the ileo-caecal valve. The contents had become extravasated in the abdominal cavity. Thus, what was supposed during the operation to be intestine, was really the sac; the fluid and the gas it contained were derived, the one from a peritoneal exudation, the other from the intestine itself, which had ruptured much higher up at the seat of an ulcer. A correct diagnosis in such a case was almost an impossibility. There would really seem to have been no strangulation whatever; all the patient's symptoms having been directly due to perforation and consequent peritonitis. The simultaneous existence of a hernia was merely an

accident, which, however, from its nature, was calculated to induce an error of diagnosis.

18. *Gallardo on Suborbital Neurotomy*.—Dr. Gallardo (*Siglo Medico*, Nov. 21, 1881) narrates a case of cure of neuralgia of the infra-orbital nerve by division, after various other forms of treatment had failed. The patient had, at the date of writing, been free from all pain for four months. The author considers that only such cases of neuralgia as are of peripheral, as opposed to constitutional origin, should be subjected to operative interference. Some indication of the probable success of an operation may be gathered from the conduct of such forms of neuralgia under local treatment, such as hypodermic injections. Should these fail to give relief, the disease is probably of constitutional origin, and an operation is contraindicated.

19. *Sacerdoti on a Case of Rupture of Bladder and Urethra Successfully Treated by External Urethrotomy*.—The patient, whose case is reported by Dr. Sacerdoti in the *Gaz. Med. Italiana Prov. Venete*, Nov. 19, was a boy aged 13, who fell across a beam of wood, striking, in the first instance, his perinæum. When seen, the objective symptoms were great discoloration over the inguinal, scrotal, and perineal regions, a wound on the inner and upper portion of the left thigh, and a globular tumour in the supra-pubic region. No urine could be passed, though the desire to do so was very great. On pressing the tumour, urine could be made to flow out of the wound in the thigh; but following up the track most carefully, the author could not, nevertheless, reach the bladder, nor could he enter it *per urethram*. Taking these and other symptoms into consideration, he believed he was in presence of a case of ruptured urethra and bladder, with extensive extravasation of urine. He, therefore, performed external urethrotomy, introducing, on the second day, a catheter to draw off the urine as secreted. On the eighth day, an abscess opened at the seat of the wound in the thigh, but gradually all adverse symptoms disappeared, and two months after the operation the urethral fistula had healed, and the patient was discharged completely cured. Antiseptic treatment was adopted throughout.

20. *Marocco on a New Method of Treatment of Specific Inguinal Adenitis*.—Dr. Cesare Marocco's method of treatment (*Gaz. Med. Italiana Prov. Venete*, Dec. 3, 1881) consists essentially in excision of the infected glands. He considers such a treatment to be especially indicated when adenitis has changed into periadenitis, and when the neighbouring tissues have become boggy, and form, as it were, a focus of suppuration. The presence of pyrexia, and of general constitutional disturbance, is no bar to the operation. This is simple, consisting merely in enucleating the diseased glands, stanching the flow of blood, and bringing the edges together with sutures. The author gives an analysis of five cases treated by the above method. The duration of treatment varied from twenty-two to fifty-three days. In no instance did any complications arise after the operation. [This method of treatment is not particularly new. An analysis of all the cases gives an average of thirty-three days to each, which cannot be considered a very brilliant result.—*Rep.*]

LITTON FORBES.

PATHOLOGY.

RECENT PAPERS.

1. STRAUSS.—Cardiac Hypertrophy in Renal Disease. (*Arch. Gén. de Méd.*, Jan. 1882.)
2. LUKJANOW.—Functional Disturbances of Single Cavities of the Heart. (*Centralbl. für die Med. Wiss.*, No. 49, 1881.)
3. CAYLA.—Tuberculosis of the Fallopian Tubes. (*Le Progrès Méd.*, 1882, No. 1.)
4. DALE.—The Infection of Phthisis. (*Lancet*, Dec. 1881, p. 1108.)
5. MAYOR.—Renal Lesions in Pregnant Women. (*Revue Méd. de la Suisse Romande*.)
6. SANDERS.—Hæmorrhage into the Ventricles of the Brain. (*Amer. Jour. of Med. Sciences*, Oct. 1881.)
7. KEY.—Recurrent Retrobulbar Medullary Sarcoma: Metastases in the Sub-dural Space of the Brain and Spinal Cord. (*Hygieia*, 1881; and *Nord. Med. Arkiv*, Band xiii.)
8. ALBERT.—Congenital Deficiency of Part of the Tibia. (*Allgem. Wiener Med. Zeitung*, No. 27, 1881.)
9. BAUMGARTEN.—The Transformation and Proliferation of the Epithelium of the Intestinal Lymphatics. (*Centralbl. für die Med. Wiss.*, No. 3, 1882.)
10. LANGHANS.—The Formation of Cavities in the Spinal Cord as a Result of Interruption to the Circulation. (*Virchow's Archiv*, Band lxxxv.)
11. ROSENBERGER.—The Nature of the Septic Poison. (*Centralbl. für die Med. Wiss.*, No. 4, 1882.)
12. NAMVERK.—Contributions to the Pathology of the Brain. (*Deutsches Archiv für Klin. Med.*, Band xxix.)

1. *Strauss on Cardiac Hypertrophy in Renal Disease.*—Dr. L. Strauss (*Arch. Gén. de Méd.*, Jan. 1882) has ligatured the ureter in rabbits, and has found as a result hydronephrosis and hypertrophy of the left ventricle. He refers to the clinical observation of Potain, that cardiac hypertrophy follows nephritis secondary to obstacles to the flow of urine. He gives two cases of hypertrophy of the heart, following obstruction of the ureter from cancer of the uterus. These facts appear to point to the conclusion that a lesion primitively and exclusively renal can determine cardiac hypertrophy.

2. *Lukjanow on Functional Disturbance of Single Cavities of the Heart.*—Lukjanow, at the suggestion of Professor Botkin of St. Petersburg, has undertaken (*Centralbl. für die Med. Wiss.*, 1881, No. 49) a series of experiments on dogs and rabbits, to determine whether the harmonious working of the heart as a whole may be prevented by occlusion or ligature of the coronary arteries, by stoppage of the respiration, or by occlusion of the aorta or pulmonary artery. He summarises the results as follows. 1. The occlusion of one coronary artery affects first the side supplied by it, then the other side, and primarily influences the auricle. 2. Occlusion by clamping causes changes in the number and character of the contractions; the ligature differs only in producing the effect sooner. 3. Changes in the number and character do not always proceed equally. 4. Inequality in the contractions of the auricles is produced much more easily than of the ventricles. 5. The contractions of the auricles and ventricles may easily be made to be unequal in number; also the two auricles may be readily made to contract at different rates, but it is much more difficult to obtain this result with the ventricles. 6. Between the regular cardiac contractions and the irregular oscillation of muscular fibres, there is an intermediate stage of peristalsis which may run through the heart quite

regularly; the heart's muscle is capable of peristalsis and antiperistalsis. 7. While the auricle is contracting regularly, but the ventricle, in consequence of occlusion of a coronary artery, shows only peristaltic movements, irritation of the peripheral end of the vagus affects the movements of the auricle, but not those of the ventricle. 8. The secondary frog's thigh contractions, which in a normal heart are manifested by all its cavities, are enfeebled by clamping a coronary artery, chiefly on the side supplied by it; most frequently secondary contractions are not retained under these circumstances, an explanation of which is not afforded either by alterations in the number and energy of the heart's contractions, or by changes in the frog's thigh. 9. At a certain stage of the clamping of the left coronary artery, the left auricle shows marked congestive phenomena. 10. The alterations produced by occluding a coronary artery may disappear completely on the clamp being removed, with restoration of the heart's function. 11. The conus arteriosus, as regards its function, is in certain degrees independent. 12. Sudden asphyxia affects sometimes most the right heart, sometimes the left; but the phenomena are not the same as those produced by occlusion of the coronaries; amongst other things, there is no decided tendency to peristalsis, and a less rapid influence on the secondary contractions. 13. The influence of coronary occlusion appears to be very probably attributed to two principal factors; first to the more or less sudden and complete ischæmia; second, to the retention in the heart of the waste products produced by its continued contraction for some time after the occlusion.

3. *Cayla on Tuberculosis of the Fallopian Tubes.*—M. A. Cayla (*Le Progrès Méd.*, 1882, No. 1) reports the case of a young woman, aged 22, who was admitted under Dr. Moutard-Martin, apparently in good bodily health, and with no history of serious illness or hereditary tendencies, but who sought relief from nervous attacks from which she had suffered for some years, and which had lately become more frequent. She presented excessive mobility, occasional ecstatic phenomena, moderate attacks of hysteria, aphonia, irregular capricious appetite; in short, all the symptoms of hysteria with fair general health. She remained two months in the wards without having shown any other symptoms, when she was suddenly taken with epistaxis, diarrhœa, and weakness; the skin was hot and moist. She was supposed to have typhoid fever, although no rash could be found; and the diagnosis was doubtful. Her illness lasted forty days, and terminated fatally. At the necropsy there was found general peritonitis; the liver was enlarged and fatty; the pelvic peritoneum was covered with false membranes; the uterus was healthy and of normal size; the broad ligaments were thickened; the ovaries were healthy on section, surrounded by somewhat dense fibrous capsules. The Fallopian tubes were enlarged, and recognised with difficulty amidst the reddish-grey false membranes enveloping them; on section they appeared convoluted; their diameter was 6 millimètres, and their cavities were filled with caseous material. The lungs and other organs were healthy.

ROBERT SAUNDEY, M.D.

4. *Dale on the Infection of Phthisis.*—Dr. W. Dale, in the *Lancet*, Dec. 1881, p. 1108, raises an earnest protest against the idea of infection in phthisis. A few cases that apparently lend support

to this view have been brought forward, but closer examination shows that they are not sufficient to affect the question in any way, seeing the immense amount of evidence on every side of us, proving that the disease is not infectious. Dr. Bale thus concludes his very valuable warning. 'I have only to add that I cannot imagine a more lamentable thing, than that the public at large should get the idea that phthisis is contagious, which appears to be held by some of the present race of practitioners, and held, I maintain, on the slightest and most insufficient grounds, without, as far as in one lies, earnestly protesting against it; for, seeing the disease is so widespread, and seizes young, delicate, and helpless girls and women chiefly, it seems to me that it were a barbarous and unwarrantable thing to raise the question of contagion in the public mind in connexion with it, and on evidence which I believe to be utterly worthless.' [Many papers for and against the contagious theory of phthisis are noticed in the *Med. Digest*, section 681-5; but the statistics of the Consumption Hospital, given by Dr. Cotton in the *Lancet*, vol. ii, 1867, p. 550, seem to place the fact of phthisis being non-contagious upon an immovable basis.—*Rep.*]

RICHARD NEALE, M.D.

5. *Mayor on Renal Lesions in Pregnant Women.*—Mayor (*Revue Méd. de la Suisse Rom.*) has classified the various renal alterations which may occur in pregnant women. Albuminuria of pregnancy is considered by some as due to purely mechanical causes, the uterus in its development compressing the arteries above the kidney, or the renal veins; according to other writers, albuminuria is the result of blood-changes; while others still regard it as a serumuria. From his own researches, Mayor is inclined to admit the constant existence of a nephritis, although he does not categorically assert it. 'All that we can affirm', he writes, 'is that on the one hand, in every case of eclampsia we have observed the existence of manifest lesions of the kidneys; and, on the other, the lesions of the secreting cellules of the kidney we have met with in pregnant women are those which Cornil has described as occurring at various periods in the course of parenchymatous nephritis. In puerperal nephritis, the first change is a period of congestion; this is followed by a period of inflammatory anæmia, during which the formation of casts and the dilatation of tubules take place. The lesions described are characteristic of nephritis, and do not pertain to the pathological process known as degeneration. This parenchymatous nephritis is allied to nephritis *à frigore*, and has no relation with the secondary nephritis of febrile affections and acute diseases, or with that form occurring in certain varieties of intoxication'. Chemical reaction of the albumen passed was thought to present another argument in favour of the similarity existing between puerperal nephritis and nephritis *à frigore*. Mayor cites a case which demonstrates that lesions of the kidney predispose women affected with uterine diseases to grave accidents, just as renal trouble exerts a baneful influence in traumatism. Albuminuria, however, may be absent during pregnancy, and may appear at the time of development of some febrile affection. We cannot look upon the nephritis of pregnancy as a constant precursor of puerperal phenomena and puerperal albuminuria. Nephritis of pregnancy, as well as the puerperal form, usually yields to treatment. During puerperal fever, changes in the kidney of various characters are met with; some of

these changes begin during pregnancy, others belong properly to the puerperal state. The latter may occur under two different forms, either as parenchymatous changes, or as interstitial suppurative nephritis. The suppurative nephritis is probably similar to that observed in surgery, in pyæmia resulting from affection of one or the other part of the urinary tract (surgical kidney). The parenchymatous changes, in their elementary lesions, resemble those met with in parenchymatous nephritis *à frigore*, and is entitled to the name of puerperal nephritis. This form of parenchymatous nephritis gives rise to but one well-marked symptom—albuminuria. In its anatomical character and its clinical aspect, it differs from the renal changes of typhoid fever, and resembles nephritis *à frigore*.

6. *Sanders on Hæmorrhage into the Ventricles of the Brain.*—The symptomatology of primary, intermediate, or direct hæmorrhage into the cerebral ventricles, has been carefully investigated by Dr. Edward Sanders of New York, from an analysis of the clinical histories of ninety-four cases which he has diligently collated. The results of the study form an important contribution to the literature of this little known subject, and are published in the October (1881) issue of the *Amer. Jour. of the Med. Sciences*. The premonitory symptoms, as indeed those of onset, do not differ materially, where the effusion takes place primarily into the ventricles, from those of ordinary cerebral hæmorrhage. Cephalalgia is the most common and constant of the premonitory symptoms, and may have existed for a long time; dizziness is less frequently observed. The attack may be immediately fatal, or it may be ushered in by convulsions, by paralysis without loss of consciousness, by paralysis with partial or complete loss of consciousness, or by partial or complete loss of consciousness without paralysis: the latter being the most frequent mode of onset met with in primary intraventricular hæmorrhage, at least in this particular series of cases. The symptoms are elaborately considered. As regards the leading phenomena and their significance, it is stated that coma, whether light or profound, is to be considered 'as a constant symptom of primary intraventricular hæmorrhage'. As regards motor disturbances, no direct relation can be traced between the seat, amount, and extent of the ventricular extravasation and the presence or absence of muscular contractures; and the greatest variation is noticed in different cases in the amount, persistence, permanence, or tetanic characters of the spasm. Sanders says, in regard to general clonic convulsions, that he believes them to be 'one of the most important and frequent symptoms of immediate ventricular extravasation'. This may be attributable to direct injury from the effusion, or to its pressure upon adjacent motor centres. A careful comparison of simple and complicated cases, however, shows 'that the variety or extent of the complication has no essential bearing in the occurrence of convulsions, the ventricular extravasation itself being undoubtedly the inducing cause'. The *tâche cérébrale* may also be present. Where apparent improvement takes place, it is generally soon followed by symptoms of the most aggravated kind, terminating in death, no second remission having been observed in a single case.

7. *Key on Recurrent Retrobulbar Medullary Sarcoma: Metastasis in the Subdural Space of the Brain and Spinal Cord.*—Dr. Axel Key, who some years ago called attention to the conditions under

which metastasis of tumours occurred in the sub-arachnoid space of the brain and spinal cord, describes the following case in *Hygeia*, 1881 (*Nordiskt Med. Arkiv*, Band xiii, Häft 3). A lad, aged 16, showed, in the beginning of December, signs of a tumour in the right orbit, outside the eyeball. It grew so rapidly that, when he was admitted to hospital on January 3rd, it had displaced the eyeball, and pressed on the parietal sinus, the lachrymal passage, and the maxillary sinus. On the 10th, it was removed by Professor Rossander, but soon returned, and grew rapidly, until the boy's death on February 6th. It was then as large as a man's closed fist, had destroyed the bones of the face around the orbit as far as the palate, and had extended from the orbit to the dura mater, involving also a limited portion of the right anterior lobe of the brain, where there was firm adhesion between the dura mater and arachnoid and the surface of the brain. Beyond this, no formation of tumour was found anywhere in the subarachnoid space, or in the interior of the brain; and it was therefore evident that none of the diseased material had been carried into the subarachnoid space; at least, it had not there come into action. The growth was continuous in the dura mater as far as the foramen magnum, and extended 5 centimètres (nearly two inches) into the dura mater of the spinal cord, where it ended in a well-defined edge. Beyond this, there was no disease for about two inches; then it recommenced, not, however, being continuous, but appearing in the form of small nodular masses at the sides, along the lines of exit of the nerves and the attachments of the ligamentum denticulatum. Closer examination showed that it was not at the points of exit of the nerves, but around the processes of the denticulate ligament in connection with the dura mater, that the metastases had occurred. Dr. Key had not previously believed that these parts exclusively could be points at which the infective matter conveyed by the subdural space could be arrested, but he finds now that such is the case. The growth was a round-celled medullary sarcoma, with little or no intercellular substance. No metastatic deposits were found in any of the internal organs; and hence it was clear that there was no general infection, but that the growth had spread in a discontinuous manner, by metastasis, only within the subdural space.

A. HENRY, M.D.

8. *Albert on a Case of Congenital Deficiency of Part of the Tibia.*—Deficiencies in the bones of the lower extremities are rare. Four cases have been recorded by Billroth, Pauly, and Albert, in one of which both legs were affected, in the other three the right tibia. In the case recorded by Professor Albert (*Allg. Wien. Med. Zeit.*, No. 27, 1881) the defect was also on the right side. The patient was a female infant four days old. The right foot was normal in form, but was so placed that the dorsum looked backward. On the inner side of the leg was a small navel-like tumour, under which the lower end of the tibia was to be felt. Only the upper two-thirds of the bone was present, and there seemed to have been a constriction of the leg at the point of defect. The movements of the foot were active.

9. *Baumgarten on the Transformation and Proliferation of the Epithelium of the Intestinal Lymphatics.*—Professor Baumgarten calls attention (*Centralbl. für die Med. Wissensch.*, No. 3, 1882) to the changes occurring in the epithelium of the intes-

tinal lymphatics in inflammatory and other allied affections. The thin flattened cells swell out into large round or cubical cells, and frequently, by their proliferation, actually plug the widened lumen of the vessel, thus producing a histological tissue, allied in appearance to tubercular glands, or columns of cancer-cells, rather than to lymph-vessels. This result may be produced by inflammation, either of the serous or of the mucous coat, and it is best studied in the intralaminar lymphatic plexus of Auerbach, which lies between the two muscular layers. The inflammation need not by any means have extended by direct continuity to this tissue. The condition, which he calls lymphangitis hyperplastica intestinalis, is produced, he believes, by the absorption of inflammatory matter from a distance, just as lymphangitis is caused by inflammation of the skin. Dr. Baumgarten considers that his results give support to those who hold that certain forms of cancer may take origin from lymphatic epithelium; and, at the same time, they show the necessity for caution in reaching conclusions, as it appears that simple inflammatory irritation of lymph-vessels may produce the appearance of cancerous growths.

10. *Langhans on the Formation of Cavities in the Spinal Cord as a Result of Interruption to the Circulation.*—From the examination of four recent cases of this condition (syringomyelia), the writer comes to the conclusion (*Virchow's Archiv*, Band lxxxv, p. 1) that it results from abnormal pressure in the cerebellar vallicula. In all four cases there was a local compression; in the first three from sarcomatous tumours, in the last from some cause not related. Only the cervical part of the spinal cord was affected; and, in the first three, the cavity was distinctly made out to be a diverticulum from the central canal of the cord, having therewith only a very narrow communication, from which the cavity extended downwards, mostly in the anterior part of the posterior column. The condition results, according to this observer, from the deposition of gelatinous material between the nervous elements; a special form of œdema, analogous to internal hydrocephalus from pressure on the venæ Galeni.

11. *Rosenberger on the Nature of the Septic Poison.*—Dr. Rosenberger puts the question (*Centralbl. für die Med. Wiss.*, No. 4, 1882), Can an animal be infected by means of minute quantities of the serum or blood of another which has died from the effects of a boiled septic poison? An animal killed by a septic poison which has been boiled and is thus free from bacteria, cannot be said to have been infected; it has been poisoned, and if there be in its body no multiplication of the poison, small quantities of its serum or blood ought no more to be capable of poisoning another than the same amounts taken from an animal poisoned with strychnia. To answer the question, Dr. Rosenberger boiled and filtered considerable quantities of septic blood and other fluids. The invariable result of an injection of the fluid thus obtained was death, with the *post mortem* appearances of septicæmia, and the presence in the animal fluids of the same micro-organisms, and in the same amount as in the animals killed by the un-boiled poison; with this difference, however, that the boiling evidently much diminished the virulence of the septic poison, as much as 1 cubic centimètre being necessary to kill a rabbit; while, of the un-boiled poison, the amount held on the point of a needle was sufficient. Experiments made with the blood, etc., of animals so killed by the boiled septic fluid, brought out the fact that the smallest quan-

ties were sufficient to cause death. That is, the poison had again reached its former virulence. To make absolutely certain that no organisms were contained in the boiled septic fluid, it was allowed to remain two hours in the vessel at a temperature of about 140 deg. Cent. (284 deg. Fahr.), and a perfectly new syringe was used, after previous disinfection with carbolic acid and absolute alcohol. Control experiments of the most careful kind were also made. Dr. Rosenberger recognises two kinds of septicæmia in rabbits—that known as Pasteur's (the malignant œdema of Koch), and that known as Davaine's, both alike in the clinical features and the grosser pathological appearances, but differing in the species of bacteria present, of which a full description is given. He found that the micro-organism resulting from the injection of the boiled septic fluid of these varieties of septicæmia was invariably that peculiar to the form from which it was derived. Control experiments with these fluids were also made by means of cultivation. From these experiments, Dr. Rosenberger considers himself justified in drawing the following conclusions. 1. In septic infection, the bacteria are not primary but secondary, always receiving their virulence from meeting with a chemical or unformed poison. 2. The bacteria, and these alone, multiply the septic poison in living animals; and the origin of these specific bacteria of septicæmia is, he believes, the schizomycetæ naturally present in the body, and modified through the action of the septic poison present in the boiled fluids.

12. *Nauwerk on the Pathology of the Brain.*—Dr. Nauwerk makes the following contributions to the pathology of the brain, in *Deutsches Archiv für Klin. Med.*, Band xxix, p. 1. 1. *Purulent Meningitis in Croupous Pneumonia.*—Of 1,172 cases of croupous pneumonia treated in the Zürich Hospital from 1869 to 1879, 14 were complicated with purulent meningitis; all fourteen died. As there were no cases of epidemic cerebro-spinal meningitis, a special cause for the complication had to be sought. The patients were mostly drunkards or aged individuals. There was purulent infiltration of the lungs; and the writer believes the cause of the meningitis in such cases to be embolism of the cerebral arteries, either from vegetations in the heart and ulcerative endocarditis, or from thrombi in the lungs. 2. *Cerebral Abscess.*—A male, aged 35, had, at the age of seven years, received a severe blow on the head from an axe, fracturing the right parietal bone and injuring the brain. He did not lose consciousness, and was able to walk home, feeling, however, slight weakness of the left limbs, which persisted throughout life. For three years after the injury, there occurred every three or four weeks convulsive attacks confined to the right arm and leg, and accompanied by no loss of consciousness. For the next twenty-three years he felt quite well; but, in the beginning of 1879, the convulsions of the left limbs again returned, the muscles of the face and neck being now occasionally involved, but the consciousness still perfectly clear. He had headache, exaggerated left tendon reflex, slight left anæsthesia, and neurorinitis. The facial nerve was unaffected. In the first half of 1880 there were almost daily convulsive seizures, frequently, also, vomiting. On June 17th, 1880, death occurred. The *post mortem* examination showed multiple cortical abscesses in the right hemisphere, and defect of the cortex in the right fissure of Rolando. JAMES ANDERSON, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. AHLFELD, F.—On the Morbidity in Lying-in Hospitals. (*Centralbl. für Gynäk.*, den 14 Jan. 1882.)
2. AUVARD.—Modification of Cusco's Speculum. (*Annales de Gynéc.*, Jan. 1882.)
3. BANTI, GUIDO.—Anatomico-Pathological Study of General Hypertrophy of the Mammæ. (*Arch. della Scuola d'Anat. Patol. di Firenze.* Volume Secondo.)
4. BUDIN, P.—The Diagnosis of Pelvic Presentation during Pregnancy. (*Annales de Gynéc.*, Jan. 1882.)
5. FRANK.—Contribution to the Study of Cæsarean Section. (*Centralbl. für Gynäk.*, den 10 Dec. 1881.)
6. GALLARD, T.—Primary Cancer of the Uterine Mucosa. (*Jour. de Méd. de Paris*, 14 Jan. 1882.)
7. GARRIGUES, H. J.—A New Form of Vaginal Depressor. (*New York Med. Record.*)
8. GRENSER.—On Labour in Old Primiparæ in Private Practice. (Leipzig: W. Engelmann, 1881.)
9. HOFMEIER.—On the Etiology of Rupture of the Uterus. (*Centralbl. für Gynäk.*, den 24 Dec. 1881.)
10. KÜSTNER, O.—On the Pathology and Therapeutics of Vulvar Carcinoma. (*Zeitsch. für Geburtshilfe und Gynäk.*, Band vii, Heft 1.)
11. MARSH, J. O.—Menorrhagia and Metrorrhagia of the Climacteric Period. (*Obst. Gaz.*, Cincinnati, Dec. 1881.)
12. MARTIN, A.—Hæmatometra following Typhus Fever. (*Centralbl. für Gynäk.*, den 24 Dec. 1881.)
13. MONOD, CH.—Enormous Distension of the Breasts in a Pregnant Woman. (*Soc. de Chir.*, Paris, 10 Aout, 1881.)
14. MORISANI.—On Symphyseotomy. (*Annales de Gynéc.*, Dec. 1881.)
15. PAJOT.—Difficult Labour from Abnormal Direction of the Expulsive Powers. (*Ibid.*, Jan. 1882.)
16. PARTRIDGE, E. L.—Accidental ante partum Hæmorrhage. (*New York Med. Jour. and Obst. Reviewer.*)
17. PROKOWNIK.—Pruritus Uterinus. (*Centralbl. für Gynäk.*, den 10 Dec. 1881.)
18. PUCCI, PIETRO.—Dystocia from Two Fœtuses United by a Membranous Canal. (*Rivista Clinica di Bologna*, Ottobre 1881.)
19. SHALLER, J. M.—Adherent Placenta. (*Obst. Gaz.*, Cincinnati, Nov. 1881.)

3. *Banti on Hypertrophy of the Mammæ.*—Dr. Banti is of opinion that the condition called hypertrophy of the mammæ exists in two forms. The first variety is that of false hypertrophy, which itself may be divided into three different varieties. The second form is a hyperplasia of all the tissues which compose the mamma, glandular as well as connective. This is true hypertrophy. He regards true and false hypertrophy as being two distinct entities, and cannot regard them, as some authors do, as merely two stages of the same disease.

4. *Budin on Presentation of the Pelvic Extremity during the Last Weeks of Pregnancy.*—Dr. Budin gives details of six cases, in which the pelvic extremity of the fœtus presented, and became permanently engaged in the upper strait of the pelvis during the last week or two of pregnancy. In general, the fœtuses were rather small, the liquor amnii was scanty, and the uterus was firmly contracted upon the fœtus. Most authors omit to mention the fact that the breech may engage in the pelvis before labour and pass through first. Other authors deny the possibility of such a thing happening.

12. *Martin on Hæmatometra after Typhus.*—FRAN. G., aged 28, menstruated at 15; had three normal labours; the last two years before the present attack. In

September 1880 she had a severe attack of typhus fever, during which there was a profuse discharge from the genital organs. At the beginning of October 1880, whilst the patient was unconscious, a fetid cylindrical mass was evacuated *per vaginam*, which was recognised as the cervix uteri with the upper portion of the vaginal canal. The patient recovered from the typhus fever with aphonia, but there was no complaint of any uterine trouble. The menses did not reappear, and their normal dates were marked in November, December, and January, by severe abdominal pain, but by no escape of any discharge. On January 31, 1881, the following condition was found on examination; abdomen tender; vagina tolerably broad, very short; just about halfway up the normal vaginal distance, the finger detected a transverse cicatrix, on which several warty projections could be felt. On bimanual examination, a large tumour, of the size of two fists, could be felt filling the vagina. On February 2, 1881, the cicatrix was stretched and divided, and the sound passed through into the uterus. Characteristic decomposed hæmatometric blood then escaped. The cicatrix was then further incised on each side of the sound, and dilated with the finger, so that a good opening was made into the uterine sac. A drainage-tube, surrounded with a pad of cotton-wool, was now inserted. During the following days, a large quantity of dark blood escaped. The uterus slowly contracted to the size of a fist. There was no febrile complication; the pulse and temperature remained normal. By the time the patient got up, the uterus had still further contracted. The wound had contracted closely round the drainage-tube, and had become covered with skin. The menses appeared, without pain, three weeks after the operation. On May 15, the drainage-tube was removed, whereupon the cicatrix contracted to such an extent that a secondary operation became necessary. The whole cicatrix was excised, and the vagina united by deep sutures with the body of the uterus. This procedure left a free open canal for the menstrual discharge. On examination, on November 22, the short vagina was found to terminate in a transverse slit, with anterior and posterior lips. The sound passed in through this opening to a distance of 6.5 centimètres. The uterine body appeared to be of the normal thickness. Dr. Martin states that such atresia after typhus are not common.

13. *Monod on Enormous Distension of the Breasts during Pregnancy.*—The patient, shown to the Société de Chirurgie by M. Monod, was pregnant four months; the breasts had acquired an enormous development. She had already had two pregnancies, and during each the breasts had become very voluminous. In the second pregnancy, the milk flowed in such abundance that she was, so to speak, drowned by it. When shown, she was four months pregnant, the swelling had existed two months, and the emaciation of the patient was marked. M. Monod asked what was to be done. Ablation of the breasts could not be thought of; it would be dangerous during pregnancy, and palliatives were insufficient. He thought the case should be placed in the category of contracted pelvis, and abortion induced. M. Després said the case was exceptional; nothing similar had been published. He thought suction would be useful. M. Horteloup would wait until the exhaustion increased before producing abortion. M. Sée was of opinion that suction would only augment the weakness of the patient, just as tapping in ascites, by causing fresh secretion of

fluid, reduced the strength of the patient. He agreed with M. Monod, that abortion should be produced. M. Monod said three similar cases had been published in a thesis by Labarraque, and in these cases the hypertrophy had disappeared with the termination of the pregnancy. Hence he thought abortion would be the only effectual means of reducing the hypertrophy.

14. *Morisani on Symphyseotomy.*—Dr. Morisani gives statistics of 50 cases, in which symphyseotomy has been performed at Naples on 48 women. In two cases, the operation was performed twice on the same subject. Of these, 40 mothers survived, 10 died; 41 children survived, 9 died. Sometimes the operation had been performed some time after the beginning of labour, and in several cases the child had been treated to other different manœuvres and operations before the operation of dividing the symphysis pubis was resorted to. The diameters of the pelvis varied. In 12 cases, the conjugate was 81 millimètres; in 16 it was 74 millimètres; in 7, it was 69 millimètres; in 13, it was 67 millimètres; and in 2 cases it measured only 61 millimètres; but these were exceptional cases. The operation thus ranged between 81 millimètres and 67 millimètres. The only operation, in the opinion of Dr. Morisani, which competes with symphyseotomy, is embryotomy. Tibone lost 21 mothers out of 100 after embryotomy. Chiara lost 24 mothers in 100 such cases. He compares these figures with 10 deaths out of 50 cases of symphyseotomy, and remarks that the mortality among the mothers is less, and that, whilst by embryotomy all the children were destroyed, 41 out of 50 fetal lives were saved by the division of the symphysis. The method resorted to by Morisani, in performing symphyseotomy, is as follows. A small, crocheted-shaped, blunt-pointed knife, curved, and cutting on its concave edge, is used. It is known as the *falcetta di Galbiati*. An incision of from 3 to 5 centimètres is made just above the symphysis pubis. The articulation is gradually reached, the *falcetta* is slipped along the posterior surface of the symphysis, and, once the lower edge of the symphysis is reached, the cutting concavity of the instrument is hooked under the interpubic cartilage, which is then cut through from below upwards. If the uterine contractions are strong, the expulsion of the child is then allowed to take place spontaneously. If they are feeble, or the head does not descend, the forceps is applied. Lastly, the wound is dressed, and immobility of the pelvis secured by an appropriate bandage. The operation of symphyseotomy has been performed in the obstetric clinic, and maternity ward of the hospital for incurables at Naples. The period traversed is from 1868 to the end of December 1880. The chief operators were Novi, Martini, and Morisani.

18. *Pucci on Dystocia from Joined Fœtuses.*—The fœtuses were united by integument between the abdomens. The uniting canal was divided by scissors. The liver, intestines, and umbilical cord were implicated. The section made, the first fœtus was delivered by the forceps and the second by turning. The twins were male, fully developed at term. The second presented no umbilicus; in the first the umbilicus was situated in its usual position. The funis was inserted into a single placenta of normal size. It contained two arteries and one vein. The uniting integument was composed of a canal three fingers' breadth in length, with walls of the same structure and thickness as the abdominal skin. The canal formed a means of communication between the two

abdominal cavities. It was symmetrically inserted at its two extremities into each foetus, near the centre of the epigastric region.

FANCOURT BARNES, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. FAUVEL.—A Bullet that had lodged in the Head found Ten Years afterwards in the Larynx. (*Rev. Mens. de Laryngol.*, Oct. 1881.)

2. EHRENDORFER.—Enchondroma of the Larynx. (*Wiener Med. Woch.*, (July 2, 1881.)

3. COUPARD.—Paralysis of the Left Inferior Vocal Cord, produced by Glandular Compression. (*Revue Mens. de Laryngol.*, Dec. 1881.)

4. MORRILL.—Spasms of the Glottis in a Child. (*Boston Med. and Surg. Jour.*, Feb. 19, 1881.)

5. POTAIN.—Spasms of the Glottis, and Ovarian Congestion. (*Revue Mens. de Laryngol.*, Nov. 1881.)

6. BOYER.—The Influence of the Sexual Apparatus of the Female upon the Vocal Organs and upon the Formation of the Voice. (*Ibid.*)

7. WHITEHEAD.—Excision of the Thyroid Gland. (*Brit. Med. Jour.*, Nov. 12, 1881.)

8. RICHELLOT.—A case of Thyroidectomy. (*Gaz. Hebdomadaire de Méd. et de Chir.*, Nov. 25, 1881.)

9. KRISHABER.—Esophageal Tubes. (*Ann. des Mal. du Larynx*, etc., Dec. 1881.)

10. FRUHWALD.—Polypus on the Right Tonsil. (*Revue Mens. de Laryngol.*, Nov. 1881.)

11. ARMANQUÉ.—The Treatment of Inflammation and Hypertrophy of the Tonsils by Bicarbonate of Soda. (*El Siglo Med.*; *Revue Mens. de Laryngol.*, Nov. 1881.)

12. Plexiform Sarcoma in the Upper Part of the Pharynx. (*Wiener Med. Woch.*, July 2, 1881.)

13. COZZOLINO.—Ozæna and its Clinical Forms. (*Revue Mens. de Laryngol.*, Nov. 1881.)

14. SMITH, J. L.—Treatment of Laryngitis in Infants. (*Louisville Med. News.*)

15. MARTIN.—Special Points in Operating for Tracheotomy in Croup. (*Annals of Anat. and Surg.*)

1. *Fauvel on a Bullet that had lodged in the Head found Ten Years afterwards in the Larynx.*—Dr. Fauvel contributes the following curious case (*Revue Mens. de Laryngol.*, Oct. 1881.) The patient, ten years before, had received a gun-shot wound under the left eye; and medical opinion was divided as to whether the bullet had remained in the head or not. For three months, pus and small pieces of bone were discharged through the mouth. The man had since suffered, at frequent intervals, from acute pain in the head and jaws, and his general health was impaired. Seven months ago, he first felt pain in the throat, and in the jaw near the temporo-maxillary articulation and left ear, with pricking sensations, which he compared to a needle plunged in the ear. Later on, the same pricking sensation and pain were felt in the left side of the larynx. There were expectoration of blood, cough, hoarseness, trouble in swallowing, and finally aphonia. Liquids could scarcely pass. At this crisis laryngoscopic examination was made, and a dark, irregular, lobulated, fungating-looking mass was discovered, filling up the left half of the glottis and concealing the greater part of the left vocal cord. The other parts of the throat were normal. The tumour most resembled a melanotic growth; but, in consideration of the rarity of such growths in this situation, it was thought rather that the patient was suffering from the ulcerative stage of laryngeal phthisis. But afterwards, as the tumour

increased in size, and seemed very firm and resisting to the touch, it was diagnosed as osteoma, and its extraction decided on. Attempts that were made to remove it were not at first successful. The patient passed the night in coughing and vomiting; and, during a fit more violent than the rest, expelled a heavy, hard body, which proved to be a bullet. From this date the patient recovered his voice, and all pain and trouble in swallowing disappeared. Nothing could be seen of the tumour, except the slight scar where the bullet had passed through. On rhinoscopic examination, some small perforations in the upper part of the naso-pharynx were discovered. Dr. Fauvel, after remarking upon the difficulty attaching to the diagnosis of this case, says that it is equally difficult to explain the manner in which the ball passed downwards into the larynx. He suggests that, having entered apparently below the malar bone, the bullet penetrated obliquely between the ascending ramus of the inferior maxillary and the superior maxillary bone, and became lodged in the basilar process of the occipital bone, in front of the vertebral column, and behind the pharyngeal aponeurosis. The ball, instead of becoming encysted, was probably set free by the surrounding bone becoming necrosed, which would account for the discharge of the pus and spicula of bone, and the perforations in the naso-pharynx afterwards seen by the rhinoscope. Yielding to the force of gravity, it then slowly descended in front and to the left of the vertebral column, being concealed from view, first, by the veil of the palate, and afterwards by the posterior pillars of the fauces. When it reached the base of the tongue, it changed its direction, and, passing forwards and downwards, became lodged in the left ary-epiglottidean fold.

2. *Ehrendorfer on Enchondroma of the Larynx.*—The author records (*Wien. Med. Woch.*, July 2, 1881) a case of this extremely rare affection. The patient was a woman aged 73, who had suffered from paralysis of the left vocal cord for three years, not relieved by electricity. A year later, a small tumour, growing from the back of the larynx near the left vocal cord, was discovered. It increased in size, ulcerated, and was diagnosed as carcinomatous. Two years after its first appearance, swallowing and respiration became difficult, and tracheotomy was resorted to. During the insertion of the cannula, a portion of the growth was accidentally removed, and was seen to be of a cartilaginous nature. Three weeks afterwards, Professor Billroth extracted the tumour by making an incision over the left side of the neck, and separating the tumour with the fingers from its connections. It grew from the back of the cricoid cartilage, whence it had made its way into the larynx by passing between the two arytenoid cartilages. Cicatrisation of the wound was retarded by the escape of food. The existence of granulations in the larynx necessitated the introduction of special conical sounds for some time after the external wound had cicatrised. The tumour was four centimètres long, three wide, and two in thickness. It was composed of hyaline cartilage, intermixed with connective tissue. A few small cysts were also scattered through its substance.

3. *Coupard on Paralysis of the Left Inferior Vocal Cord, produced by Glandular Compression.*—The voice of the patient (*Revue Mens. de Laryngol.*, Dec. 1881) varied with the position of the head. If the head were held straight, the voice was hoarse; if turned to the right, it was somewhat stronger in tone; if to the left, there was complete aphonia.

The health was generally impaired. Laryngoscopic examination revealed immobility of the left arytenoid cartilage, and relaxation and outward deflection of the left vocal cord. On external examination, a tumour, of the size of a large almond, hard, non-adherent, and evidently an enlarged gland, was found under the left sterno-cleido-mastoid muscle, near the cricoid cartilage. As there was a doubtful history of syphilis, the treatment consisted of internal and external applications of iodide of potassium. A month afterwards, the gland had decreased notably, and the health and voice were much improved. When seen more than a year afterwards, the patient was in good health; the gland had not entirely disappeared, but the weakness in the voice was only apparent when the head was forcibly inclined to the left. [Notes of a similar case are published in the *Archives of Laryngol.*, No. 1, 1880 (LONDON MEDICAL RECORD, June 15, 1880). In that case there was incomplete abduction and relaxation of the right vocal cord, and an enlarged gland was found in the neck on the right side of the trachea, just below the level of the cricoid cartilage, projecting into the groove between it and the œsophagus. Another case is related in the *Alienist and Neurologist*, No. 2, 1880. Here the injection of acetic acid into the gland produced its reduction. In the LONDON MEDICAL RECORD, for Dec. 1881, p. 518, is an abstract of a paper by Dr. Gouguenheim, in which he describes, as one cause of paralysis of the cords, the enlargement of some small glands situated in the space between the larynx, trachea, and œsophagus. These glands are not always present, or are so small that their presence is easily overlooked; and they are, consequently, not described in anatomical works.—*Rep.*]

4. *Morrill on Spasms of the Larynx in a Child.*—A child nine months old (*Boston Med. and Surg. Jour.*, Feb. 19, 1881; *Paris Méd.*, Nov. 12, 1881), of scrofulous temperament, had been suffering from catarrhal laryngitis for two days, when he was suddenly seized with spasms of the larynx, threatening suffocation. Dr. Morrill, who was hastily summoned, observed that there was glandular enlargement on each side of the neck, without, however, any visible fluctuation. He incised the enlargement on the left side; and blood and pus were let out, to the relief of the symptoms. The same operation was performed on the other side of the neck two days later. Dr. Morrill considers that here the spasms were the result of direct compression of the larynx, and, at the same time, of the recurrent laryngeal nerve.

5. *Potain on Spasms of the Glottis, and Ovarian Congestion.*—The patient, a young girl (*Revue Mens. de Laryngol.*, Nov. 1881), suffered from difficult and noisy respiration. The laryngeal respiration was difficult, but the voice was clear. There was, however, no cough, pain, or physical signs on examination with the laryngoscope. The menstrual functions had been disturbed. The right ovary was found increased in sensibility. There was marked hyperæsthesia of the whole of the right side and analgesia of the upper extremity, resulting from some ovarian disturbance. Dr. Potain attributes the spasms of the glottis to the same cause.

7. *Whitehead on Excision of the Thyroid Gland.*—Mr. Whitehead reports a case (*Brit. Med. Jour.*, Nov. 12, 1881) of excision of the thyroid gland in an unmarried woman, aged 57. The growth had existed thirty years, but within the last five years had increased rapidly, to the great inconvenience of the patient, who suffered from hoarseness, difficult respiration, and occasional paroxysms of dyspnoea.

The tumour occupied the front of the neck, the upper border being on a level with the thyroid cartilage. It hung down in a pendulous manner on to the upper border of the sternum, and the base of its attachment extended laterally to the borders of the sterno-mastoid muscle, which were displaced by the growth. The tumour was lobulated, some of the lobes conveying a sense of fluctuation, whilst others appeared solid. The mobility of the tumour, the probability of its being of a 'fibro-cystic' nature, together with the fact that it was increasing steadily in size, and the impossibility of forming an opinion as to the ultimate size it might attain, appeared to suggest and warrant an attempt at extirpation. A vertical median incision, four inches long, was made from the upper border of the thyroid cartilage to the sternum; the sterno-hyoid and thyroid muscles were drawn aside; the superior and inferior thyroid arteries were secured, and the capsule was divided. The lateral lobes were freed by careful dissection, and the whole gland was removed by enucleation. The operation was performed antiseptically, and the patient made a complete recovery. The day after the operation there was complete aphonia; but the voice subsequently improved. The tumour was found to consist of several cysts, with interposing masses of solid tissue. The lateral lobes were hypertrophied and calcareous. Pedunculated growths descended from the central mass. [The microscopic structure of the tumour is not given.—*Rep.*]

8. *Richelot on a case of Thyroidectomy.*—This case is reported in the *Gaz. Hebdom. de Méd. et de Chir.*, Nov. 25, 1881. The patient, aged 25, was the subject of a large goitre. Six years previously, it had been punctured, and iodine injected. It had slightly improved; and four years later, three capillary punctures were made. When the patient entered the hospital, she was suffering from intense dyspnoea and dysphagia. The goitre was of the size of a child's fist, without any apparent prolongation towards the sternum. A curved incision, with its convexity downwards, was made. The loss of blood was almost as great as that usually following amputation of a limb. The operation, with the dressing, lasted two hours. Immediately after the operation, there was complete aphonia. The laryngoscope showed immobility of the vocal cords. Dr. Krishaber concluded that both the recurrent nerves had been cut. Four months afterwards, however, the voice reappeared with its normal tones.

9. *Krishaber on the Œsophageal Tube.*—The conclusions of M. Krishaber on this subject (*Ann. des Mal. du Larynx, etc.*, Dec. 1881) are as follows. 1. The œsophagus can bear the retention of a tube *in situ* for an indefinite time. 2. The tube must be introduced by one of the nostrils, and not by the mouth. 3. The continual presence of the tube produces the degree of dilatation necessary for the insertion of increasingly larger tubes, as is the case in catheterisation of the urethra. 4. In cases where the stenosis is too great to permit the introduction of a soft tube, a gum catheter should be first introduced, and replaced, after several days, by one made of caoutchouc, which is softer and more easily tolerated. The substitution of the second tube should be made immediately after the withdrawal of the first. 5. Alimentation is assured, and false passages, that are apt to be made by intermittent catheterisations, are avoided. 6. In cases where the stenosis requires œsophagotomy, the tube should be placed *in situ* immediately the incision is made, so that cicatrization goes on around the tube, and coarctation of

the œsophagus is avoided. 7. The tube may also be employed in the same manner to nourish phthisical patients, paralytics, lunatics, or patients in a state of coma or stupor. 8. The tube is of incontestable utility for large operations on the face, mouth, or naso-pharyngeal cavity. In these latter cases, the soft caoutchouc tube should be placed in the œsophagus several days before the operation, and should remain in until the complete recovery of the patient. [At a recent discussion on œsophagotomy, at the Clinical Society, Mr. Durham stated that he had treated several cases of stricture of the œsophagus by the retention of œsophageal tubes *in situ* with marked success. In his cases, however, the tubes were all introduced through the mouth, and not through the nose, as recommended by Krishaber. Mr. Durham's patients experienced no inconvenience from the presence of the tube, which was secured to one corner of the mouth.—*Rep.*]

10. *Fruhwald on Polypus on the Right Tonsil.*—The patient (*Wiener Med. Woch.*, No. 44, 1879; *Revue de Laryngol.*, Nov. 1881) was a man aged 40. The right tonsil was hypertrophied, and attached to it was a large polypus, of the size of an almond, the pedicle being six millimètres long. In certain positions it threatened suffocation. It was removed with the scissors. The microscopical structure was that of an hypertrophied tonsil.

11. *Armanqué on the Treatment of Inflammation and Hypertrophy of the Tonsils by Bicarbonate of Soda.*—Dr. Armanqué records (*El Siglo Med.*; *Revue Mens. de Laryngol.*, Nov. 1881) seven cases of acute tonsillitis, cured in twenty-four hours, by the application of bicarbonate of soda. This treatment was first recommended by Dr. Giné, who used bicarbonate of soda either by insufflation, or by direct application made by the finger of the patient. Dr. Giné reckoned the cases by dozens where cure resulted in twenty-four hours; in no case did the treatment remain without effect. Relief is nearly always immediate. The efficacy of this treatment is most marked in the early stages. Bicarbonate of soda does not lessen the predisposition to sore-throats, but arrests its development. With the frequent application of bicarbonate of soda, hypertrophy of the tonsils is also overcome in a short time, thus rendering excision of the tonsils unnecessary. The cases quoted by Dr. Armanqué confirm the opinion of Dr. Giné concerning the efficacy and rapidity of action of bicarbonate of soda.

12. *Plexiform Sarcoma in the Upper Part of the Pharynx.*—This case is recorded in the *Wiener Med. Woch.*, July 2, 1881 (*Revue Men. de Laryngol.*, Dec. 1881). For two years the patient, a woman aged 48, had complained of increasing trouble in deglutition. With the laryngoscope, a small white swelling was seen partly hiding the laryngeal aperture. The tumour could be felt on external pressure, and the submaxillary glands were enlarged. After having made fruitless efforts to extract the tumour by the mouth, Professor Billroth performed pharyngotomy, opening the pharynx and upper part of the œsophagus. The tumour grew from the posterior part of the pharynx by a pedicle of about the thickness of a quill. It was excised and the wound sutured, the operator taking care to remove all the enlarged glands before closing the wound. Union took place by the first intention. The tumour, which measured 4 centimètres in length, 2 in width, and $1\frac{1}{2}$ in thickness, was composed, in great part, of cylindrical epithelium in process of development. On section,

the capillary vessels contained in it showed the epithelium in process of proliferation.

13. *Cozzolino on Ozæna and its Clinical Forms.*—Dr. Cozzolino has just published, under the above title (Naples, 1881; *Revue Mens. de Laryngol.*, Nov. 1, 1881), a work in which he considers all the present views of ozæna. He recognises three forms. 1. Constitutional ozæna, or scrofulous rhinitis; 2. Catarrhal ozæna due to an atrophy of the mucous membrane; and 3. Simple ozæna. He considers the first variety, not as a local malady, but as a localisation of the scrofulous diathesis in the nasal mucous membrane. In this variety, the products of the secretions take the form of greenish crusts. Syphilitic rhinitis may be sometimes met with allied to the scrofulous form. The factor may be due, 1, to the diminution of the nasal fossæ by malformation or stenosis, the result of tumours, hypertrophies, etc.; 2. to the augmentation of the nasal cavity by atrophy or absence of the inferior spongy bones; 3. to a catarrhal inflammation favouring the decomposition of pus, or to graver morbid alteration (ulceration, caries, necrosis); to malignant tumours; or, finally to a simple decomposition of the secretion, as is observed in caseous coryza, in scrofulous ozæna, and in simple ozæna. The second form, atrophic rhinitis, is usually an affection of youth, and is the result of chronic rhinitis, and never occurs but in scrofulous subjects. Prognosis is much more favourable than in the preceding form, especially if the morbid process has not arrived at the atrophic stage. Under the third form, simple ozæna, the author discusses the theory of Hebdemus of Dresden, who believes that the fœtor is the result of a gaseous exhalation from a mucous membrane deprived of secretion: and the view of Fraenkel, who denies that ozæna can exist without increased secretion. Dr. Cozzolino, for his own part, believes that simple ozæna may exist in certain individuals who have naturally fetid secretions, as of the feet, axilla, etc. The treatment in this case can only be palliative. Each form of the affection will require both local and general treatment. As the indications for local treatment, the author enumerates the following: 1. To modify the surface of the mucous membrane; 2. To modify the consistency of the secretions; 3. To arrest local inflammation; 4. To modify locally the secretory products; 5. To repress or destroy exuberant tissues.

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14. *Smith on the Treatment of Laryngitis in Infants.*—Dr. J. Lewis Smith says (*Louisville Med. News*) that in ordinary cases the yellow sulphate of mercury, prescribed in powder in two-grain doses, may be administered as an emetic. The atmosphere which the child breathes should be constantly loaded with moisture, without, however, that degree of heat which would add to the discomfort of the patient. Moist air promotes expectoration and renders the cough looser. A temperature of 75 deg. to 80 deg. Fahr. is required. The following will be found a most efficient solvent for the pseudo-membrane, and should be used in the steam-atomiser:—R. Calcis, \bar{z} ss; aquæ, fl. \bar{z} viij; glycerinæ, \bar{z} ij; mix. Each second hour one ounce of the following should be used, the lime-water being used constantly between times:—R. Potassæ chloratis, \bar{z} ij; ammonii chloridi, \bar{z} j; glycerinæ, \bar{z} ij; aquæ, \bar{z} vi. The inhalation may be continued for two hours without wearying the child. If the temperature be high, quinine should be given in two or three large doses. As regards local measures, cold water may be constantly dropped from a sponge upon a compress laid over the throat of the child, or

two or three thicknesses of muslin soaked with camphorated oil may be applied over the larynx so as to cover the neck in front, and over this a bladder containing pieces of ice, or ice surrounded by oil-silk, to prevent dripping. If oxygen be obtainable, the inhalation of this agent will be found to relieve the dyspnoea.

15. *Martin on Special Points in Operating for Tracheotomy in Croup.*—Dr. William M. Martin (*Annals of Anatomy and Surgery*) gives the following. 1. That procedure is the best which dispenses with the cannula or any mechanical appliance whatever placed within the trachea, and hence the excision method, or separating the wound by wires or threads passed through the lips of the divided trachea, is to be preferred, and appears to be based upon the soundest surgical principles. 2. Tracheotomy proper is to be selected in all exudative inflammations of the windpipe. 3. The low operation is preferable on account of the greater diameter of the trachea at its middle in children, the upper portion of that tube near and at its juncture with the larynx being more contracted in early life; and, again, the further down the opening, the more apt it is to be lower than the obstructive exudate. 4. The recumbent position of the patient, with the neck raised and somewhat extended, offers the easiest posture for operation. 5. An anæsthetic is most desirable, and preference should be given to chloroform on account of its less irritating properties. It is readily administered, and but a small quantity is required to produce unconsciousness, which state should be just reached; for if reflex action be wholly abolished, the surgeon loses the valuable aid of cough in notifying him of blood passing into the trachea, and in expelling it therefrom. In a word, reduction of the cutaneous sensibility is all that is required.

DERMATOLOGY.

RECENT PAPERS.

1. NEISSER. — On the Use of Naphthol in Skin-Diseases. (*Centralbl. für die Med. Wiss.*, No. 30, 1881.)
2. UNNA. — On the Treatment of Cicatrices. (*Mittheil. des Schleswigholst. Vereins der Ärzte*, 1881. Abstracted in *Vierteljahr. für Derm. und Syph.* Heft 2 and 3, 1881, p. 499.)
3. LASSAR, LEWIN, and KÖBNER. — Discussion on the Treatment of Eczema. (*Berl. Klin. Woch.*, No. 2 and 3, 1882.)
4. KOHN, S. — On Trichorrhæxis Nodosa. (*Viertelj. für Derm. und Syph.*, Heft 4, 1881.)
5. HEBRA. — On Rhinophyma. (*Ibid.*)
6. DAMON, HOWARD F. — Pemphigus Acutus seu Febrilis. (*Arch. of Derm.*, No. 3, 1881.)
7. BULKLEY, L. DUNCAN. — On the Use of Mineral Waters in the Treatment of Eczema. (*Ibid.*)
8. PELLIZZARI, CELSO. — Certain Eruptions of the Skin produced by the Pathogenic Action of Iodide of Potassium. (*Ibid.*)
9. STELWAGON, H. W. — A Case of Phthiriasis Palpebrarum. (*Ibid.*)
10. HEBRA, HANS. — A Case of Symmetrical Partial Congenital Defect of the Cutis. (*Arch. of Derm.*, No. 4, 1881.)
11. BULKLEY, L. DUNCAN. — A Second Case of Lichen Planus affecting the Penis before developing elsewhere. (*Ibid.*)
12. ROBINSON. — The Anatomical Seat of the Parasite in Tinea Tonsurans Capillitii. (*New York Med. Jour.*, 1881, vol. 33, p. 289.)

13. GOLDSMITH. — Pigeon-Lice infesting the Skin of a Woman. (*New York Med. Record.*)

14. BESNIER, ERNEST. — On a Tumour of the Skin, which was Clinically a Cancer, but Histologically doubtful in its Nature. (*Annales de Derm. et de Syph.*, 2me Série, vol. 2, No. 4.)

15. CORNIL and SUCHARD. — Note on the Seat of the Parasites of Leprosy. (*Ibid.*)

16. BRACHET and MONNARD. — A Case of Xanthoma forming Tumours. (*Ibid.*)

17. BARTHÉLEMY. — A Case of Scleroderma in Patches. (*Ibid.*)

18. HARDY. — Note on Pellagra. (Discussion in the French Academy of Medicine, 28 June and 5 July, 1881. *Ibid.*, p. 719.)

19. DÉJÉRINE. — Changes in the Cutaneous Nerves in Pellagra. (*Ibid.*, p. 719, and *Gaz. Hebdom.*, Nos. 26, 27, and 29.)

20. POSPELOW. — Lichen Ruber Planus. (*St. Petersb. Med. Woch.*, No. 44, 1881.)

21. SESEMAN, E. — On the Treatment of Psoriasis. (*Ibid.*)

1. *Neisser on the Use of Naphthol in Skin-Disease.*—With regard to the use of naphthol in skin-diseases, as recommended by Dr. Kaposi (*Wien. Med. Woch.*, Nos. 22 and 23, 1881, and *LONDON MEDICAL RECORD*, Oct. 1881, p. 413), Neisser (*Centralbl. für die Medic. Wissen.*, No. 30, 1881), as a result of experiments on animals, warns that hæmoglobinuria may follow the absorption of naphthol when freely used, the danger being similar to that attending the free use of pyrogallac acid.

2. *Unna on the Treatment of Cicatrices.*—Unna has found (abstract in *Viertelj. für Derm. und Syph.*, Heft 2 and 3, 1881, p. 499) the cicatrices of small-pox, and after ulceration, much improved in appearance by daily rubbing with fine sand. A small sponge soaked with soap-lather, is dipped in the powder collected from the *débris* of marble, and is then steadily rubbed over the cicatrix. The resulting improvement is attributed to the stimulating effect of the mechanical irritation.

3. *Lassar, Lewin, and Köbner on the Treatment of Eczema.*—In a discussion (*Berlin. Klin. Woch.*, Nos. 2 and 3, 1882) on the treatment of eczema, Lassar recommended, in acute eczema, the employment of a two per cent. carbolic oil. Lewin preferred the prepared muslin bandages of Unna, and specially recommended ergotine in chronic eczema. Köbner expressed an opinion that, valuable as ointments were in eczema, they were too exclusively used. He could not bear out Lewin's experience with ergotine. In a case in which he had tried it, patches of circumscribed eczema had remained stationary, with the exception of a few to which tar had been applied.

4. *Kohn on Trichorrhæxis Nodosa.*—Kohn found (*Viertelj. für Derm. und Syphilis*, Heft 4, 1881) that the appearances in hairs so characterised are produced by desiccation of the centre of the hair, accumulation of air and consequent distension, and, finally, rupture of the cortical substance.

5. *Hebra on Rhinophyma.*—The enlargement of the nose, by some authors named acne hypertrophica, by Hebra rhinophyma, by Wilson spargosis, has been (*Viertelj. für Derm. und Syphilis*, Heft 4, 1881) histologically examined by Hebra. The enlargement is produced by an abnormal growth of connective tissue. The sebaceous glands are divided into lobules by growth of connective-tissue, and these

lobules enlarge. The author does not believe that the affection, as is commonly supposed, is due to the abuse of alcohol. The treatment he had found most successful is excision of the hypertrophied parts. The deeply situated portions of epidermis, between the sulci of the growth, are not entirely removed by this operation, and form so many epidermic islands, from which the new epidermis rapidly grows.

8. *Pellizzari on certain Eruptions of the Skin, produced by the Pathogenic Action of Iodide of Potassium.*—Pellizzari (*Archives of Derm.*, No. 3, 1881) describes two remarkable and rare cases, in which the administration of iodide of potassium was followed by large deep-seated tumours in the subcutaneous cellular tissue. Large bullæ covered the seat of abscesses of the fore-arm and left thigh, and left deep sores, which soon filled up with granulations. The patients were syphilitic. The iodide produced considerable constitutional disturbance; and its association with this condition, and with the nodules, was shown by the reappearance and disappearance of the symptoms, according as the medicine was given or discontinued.

9. *Stilwagon on a case of Phthiriasis Palpebrarum.*—A girl aged 11 years (*Archives of Derm.*, No. 3, 1881), presented the appearance as if she were suffering from an ordinary eczematous condition of the edges of the lids. The eyes were, in places, slightly crusted, in others scaly, and in some parts normal. Nits were observed on the lashes, and minute reddish specks, the excrement of the pediculi, on and beneath the lower lids. The pediculus was small, and belonged to the pubic variety.

10. *Hebra on a case of Congenital Defect of the Cutis.*—An otherwise well-formed child presented at birth an arrest of development of the skin on both sides of the head. The largest area of imperfect development was on the left side, and was two and a third inches long, and from one-fifth to half an inch in breadth. The patches were covered by a tender, transparent, partially folded, and very pliable membrane, beneath which a serous fluid had accumulated, which could be readily displaced.

11. *Bulkley on a case of Lichen Planus affecting the Penis before developing elsewhere.*—In this case (*Archives of Derm.*, No. 4, 1881), an eruption of lichen planus appeared first on the glans penis and inner surface of the prepuce; a few weeks afterwards just below the right knee, and, finally, on the backs of the hands and arms.

12. *Robinson on the Anatomical Seat of the Parasite in Tinea Tonsurans Capillitii.*—Dr. Robinson (*New York Med. Jour.*, vol. 33, p. 289) examined, microscopically, skin from the scalp affected with tinea tonsurans. He found that, in the rete Malpighii, both spores and mycelia were present, and, in the corium, that spores were found in varying quantity, isolated, grouped, or arranged in rows. [These conclusions are in direct variance with the results of examinations brought before the Royal Medical and Chirurgical Society by Dr. Frederick Taylor and the reporter.—*Rep.*]

13. *Goldsmith on Pigeon-Lice Infesting the Skin.*—A woman consulted Dr. Goldsmith on account of her skin being infested by very minute insects, which appeared when she sweated. Dr. Goldsmith witnessed the fact. When perspiration was induced, he observed that small black or brownish insects emerged singly, in pairs, or in triplets, from numerous points. After the sweating ceased, the insects, as the woman had asserted, 'crowded into her skin again'. The points where they entered and emerged

were the sweat-pores. The lice were communicated from pigeons, which nested in her garret, and which she frequently handled. She got quit of the pigeons, rubbed her skin with sulphur powder, boiled her clothes, and had no further trouble with the pigeon-lice. Two other cases are referred to.

14. *Besnier on a Tumour of the Skin which was Clinically a Cancer, but Histologically doubtful in its Nature.*—A man, aged 49 (*Annales de Dermat. et de Syphilig.*, 2me série, vol. ii, No. 4), noticed in the beginning of 1877 that there were several small enlargements on his back, which were at first discrete and then fused into groups, and eventually became ulcerated at several points. When seen by Besnier, in June 1878, the dorsal region was occupied by two considerable tumours; one irregularly oval, measuring 14 centimètres by 5; the second, round and fungoid, measuring 7 centimètres by 8. Both were considerably elevated, being raised from 2 to 4 centimètres above the level of the surrounding skin. The surface was unequal and nodulated, and the summits of many of them broken down by ulceration. The colour of the non-ulcerated parts of the tumours was a violet-red. The man felt well, ate well, slept well, and had no pain in the affected parts; and although the tumours occupied a considerable extent of the dorsal region, he could lie on his back without discomfort. There were no cicatrices and no enlarged glands. Clinically, M. Besnier diagnosed the growths as cancerous; but, it being recognised that their nature was open to doubt, portions were excised and examined by MM. Malassez and Chambard. The result of this examination seems to have only increased the doubt. At the periphery of a nodule, in the diffused and ill-defined zone separating it from the healthy tissues of the skin, lymph-cells were found in small numbers between the connective tissue bundles. Towards the centre of the nodule, the cellular collections become larger, and separated the bundles more widely. In the centre of the nodules these lymph-cells (*cellules lymphatiques*) were confluent and compressed against each other, the connective tissue being reduced to a few delicate finely granular and very friable fibrillæ. Blood-vessels were still found in the nodules, and from their walls projected fine fibrillæ, communicating with those which were amongst the cells. The learned histologists who examined the tumour considered that the neoplasm was either a granuloma or a lymphadenoma. M. Besnier remarks that on clinical grounds the idea of a granulation tumour must be rejected, whilst that of a lymphadenoma might be accepted. [Excellent coloured plates illustrate the paper, showing the appearance of the tumours, and also representing the microscopic appearances. Tumours nearly resembling the one in question have been brought before the Pathological Society of London during the last few years, and have given occasion to the expression of considerable difference of opinion. The reporter has found similar histological appearances in the new growth that gives its special characters to the affection known in England as rodent ulcer or rodent cancer, and has considered the neoplasm epithelial in its nature, even when the cells, as in the present case, were constituted by a small round nucleus and a very faint zone of protoplasm. Small elastic fibres and blood-vessels are found in the midst of the neoplastic cells in rodent cancer. Compare *Path. Trans.*, vol. xxx, pl. 24, and woodcut, p. 382; vol. xxxi, pl. 13 and 14; and vol. xxxii, pl. 29, figs. 4-7.—*Rep.*]

15. *Cornil and Suchard on the Seat of the Parasites of Leprosy.*—The authors (*Ann. de Derm. et de Syphil.*, 2me serie, vol. ii, No. 4) confirm the observers who have found a bacillus in leprosy. They find the parasite plentifully in the cells which form the characteristic histological feature of leprosy, but they do not find it in the cells of the epidermis. They infer that the epidermis, so long as it remains entire, prevents the diffusion of the specific element, and thus so far is a barrier against contagion.

18. *Hardy on Pellagra.*—M. Hardy showed to the French Academy of Medicine (*Ann. de Derm. et de Syphil.*, 2me série, vol. ii, No. 4, p. 719) the hand of a patient who had died of pellagra. The man had been a drunkard, and had never eaten maize. M. Hardy believes that alcoholism is a cause of pellagra; MM. Th. Roussel, Lancereaux, and Noël Gueneau de Mussy, on the other hand, stating their belief that pellagra is a specific malady always due to altered maize.

19. *Déjerine on Changes in the Cutaneous Nerves in Pellagra.*—Déjerine made (*Gaz. Hebdomadaire*, Nos. 26, 27, and 29) a histological examination of the nerves of the skin in two patients who died of pellagra in the service of M. Hardy, and found a great number of the nerve-trunks represented by empty sheaths.

20. *Pospelov on Lichen Ruber Planus.*—Pospelov (*St. Petersburger Medicin. Woch.*, No. 44, 1881) describes a case in which the eruption of lichen ruber planus was present on the tongue and mucous membrane of the hard palate and gums. The eruption was freely out on the skin of the trunk and limbs. [The author also refers to a case of Neumann's, in which the eruption was present on the mucous membrane of the mouth as well as on the back.] In regard to the etiology of the disease, he remarks that, in five out of six cases of lichen ruber that came under his observation, the eruption appeared after a rapid cooling of the whole cutaneous surface.

21. *Seseman on the Treatment of Psoriasis.*—To avoid the inconveniences attending the use of chrysarobin (chrysophanic acid) in psoriasis (extension of inflammation to the surrounding skin, etc.), Seseman (*St. Peters. Med. Woch.*, No. 44, 1881) employs a solution of 10 grains of chrysarobin in 1 drachm of collodion, with which the patches of psoriasis are painted every second day. Twice a week the patient is allowed to take a bath, and, if the skin seem very dry, to rub in simple ointment. G. THIN, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

1. SCHWEIGGER. — Strychnia Treatment and Hysterical Amblyopia. (*Klin. Monats. für Augenheilk.*, Nov. 1881.)

2. KRÖEMER. — Antiseptic Atropine and Eserine Solutions. (*Klin. Monats. für Augenheilk.*, Nov. 1881.)

3. VOSSIUS. — Treatment of Diphtheritic Conjunctivitis. (*Klin. Monats. für Augenheilk.*, Nov. 1881.)

4. GALEZOWSKI. — Statistical Review of Clinical Work. (*Recueil d'Ophth.*, Nov. 1881.)

5. GALEZOWSKI. — On Thrombosis of the Retinal Vessels in Ophthalmic Migraine. (*Gaz. des Hôp.*, Dec. 6, 1881.)

1. *Schweigger on Strychnia Treatment and Hysterical Amblyopia.*—Schweigger urges that, in hysterical amblyopia and colour-blindness, the loss of visual functions exists only in the imagination of the

patient. In several cases of this nature, he was able to prove that it was not real (*Klin. Monats. für Augenheilk.*, Nov. 1881). A girl, aged 14, with hypermetropia and deficient convergent power, stated at her second visit that the right eye had rapidly lost all perception of light. The pupil reacted to light, and, when tested by prism and stereoscope, it was manifest that the 'blind eye' had good vision. There was no appearance of intentional simulation, and there were no other signs of hysteria. No incredulity was expressed to the patient, and the case was exhibited at the clinic as one which strychnia injections would cure. Subcutaneous injections of distilled water were given, and sight returned gradually and completely in about three weeks. In this case there was neuro-retinitis in each eye, which persisted after the recovery of vision. Another hysterical patient complained of colour-blindness in the left eye; with this eye all colours were seen gray, with the other they were seen correctly. The stereoscope proved that the statement was incorrect. A small piece of coloured paper, placed in the right half of the left visual field, was correctly seen, the patient imagining that she saw it with her sound right eye. Conversely, a piece of coloured paper, placed in the left half of the right visual field, was seen gray, because the patient imagined she saw it with her left, or colour-blind, eye. A third case is mentioned, in which the patient professed to be unable to see the hand before the face, and yet was able to walk about freely without running against the objects in her path. An extreme and persistent convergence of the optic axes, which could not be effected voluntarily for the sake of simulation, occurred at the same time as the alleged loss of vision. There are many cases of simulated blindness, says Schweigger, in which there is no intentional deception. The patient's consciousness is overruled by the idea that she cannot see. In the monocular form, the artifice which the surgeon must employ, for the purpose of detection, consists in presenting the object to the supposed blind eye in such a way as to make the patient believe that it is seen with the sound eye.

2. *Kroemer on the Employment of Antiseptic Atropine and Eserine Solutions.*—The writer is of opinion that the conjunctival inflammation, which is sometimes set up by the use of atropine, is a septic process due to the formation of fungoid growth in solutions which have been long kept (*Klin. Monats. für Augenheilk.*, Nov. 1881). He found that the addition of salicylic acid to an atropine solution did not prevent it from becoming turbid; that boracic acid had only a slightly preservative effect; but that carbolic acid, in the proportion of 1 in 1,000, kept it perfectly clear. Solution of eserine, also, was found to remain clear and almost colourless when treated in the same manner. This proportion of carbolic acid is stated to produce no disagreeable sensation in the eye, and it is said that, since the introduction of these antiseptic solutions, in the clinic at Basle, conjunctivitis from atropine, which was formerly of frequent occurrence, has not been seen.

3. *Vossius on the Treatment of Diphtheritic Conjunctivitis.*—Guided by the success obtained by Professor Bose in the treatment of diphtheria of the throat and of wounds, by means of a four per cent. solution of salicylic acid in glycerine, Vossius employed the same application in a bad case of conjunctival diphtheria, and with unexpectedly good results (*Klin. Monats. für Augenheilk.*, Nov. 1881). Applications of ice and frequent cleansings with solutions of carbolic, boracic, and salicylic acids, had

been used without benefit. There were great chemosis and swelling of the lids, with extensive ulceration of the cornea. The glycerine solution of salicylic acid was painted every half hour upon the conjunctiva; improvement commenced at once, the swelling subsided, and the corneal ulceration healed. The eye recovered completely from what had been, to all appearance, an almost hopeless condition. It was noticeable that the stage of purulent discharge, through which such cases commonly pass, was absent in this instance, and that the very extensive and dangerous ulcer of the cornea healed without leaving any scar sufficient to cause impairment of vision. The patient was a little girl aged two years; the diphtheria affected the fauces in the first instance, the eyes later.

PRIESTLEY SMITH.

4. *Galezowski on a Statistical Review of Clinical Work from July 1, 1880, to July 1, 1881.*—In this paper (*Recueil d'Ophthalmologie*, Nov. 1881), Dr. Galezowski reviews a portion of the clinical work accomplished by him last year. In considering the subject of treatment of ophthalmia neonatorum, he maintains that, of all remedies which have been hitherto recommended, nothing surpasses a solution of nitrate of silver, of a strength of 1 in 40. This should be applied to the conjunctiva night and morning, the excess being neutralised with sodic chloride in the usual manner. This strength is recommended in preference to one either greater or less, inasmuch as the former would be too violent, the latter too feeble. The important point in treatment is to apply the remedy twice a day, so as to keep the parts constantly under its influence. By this method Dr. Galezowski has, within the last six years, treated more than four hundred cases of ophthalmia neonatorum, without a single failure or loss of vision. He considers it almost a specific. Should much chemosis continue after the suppuration has ceased, its absorption may be hastened by mild scarifications. In gonorrhoeal ophthalmia in adults, Dr. Galezowski recommends the use of a similar solution, viz., 1 in 40, aided by injections, eight or ten times a day, of a solution of 1 in 1000, coupled with the use of eserine, depletion, and carbolised spray. In granular ophthalmia, he uses the ordinary remedies, with the exception of acetate of lead, which, he considers, should be wholly abandoned. It is very liable to form precipitates, which, lodging in the minute spaces between the granulations, act as foreign bodies, causing irritation and ulceration of the cornea. A case is recorded of serous chemosis of the conjunctiva from the excessive use of iodide of potassium. The patient had taken 30 grains daily of this salt during a long period, and suffered from all the local manifestations of iodism. Another case is mentioned of an abscess of the cornea in a night watchman, which was traced to the influence of very low temperature. Two cases are given, which illustrate the influence of irritation of the dental nerves on other branches of the fifth. The first was that of a child aged two years, who suffered from photophobia, kerato-conjunctivitis, and abscess of the cornea, all which symptoms disappeared as soon as the canine teeth had pierced the gum. The second case was in a child aged 30 months, and was, in the main, similar to the first. As regards interstitial keratitis, Dr. Galezowski holds that there are two distinct forms of the affection, one strumous, the other syphilitic. The former generally commences as an irregular spot, and progresses from the centre of the cornea towards the periphery. The latter, on the contrary, generally spreads from the periphery to the centre. Its cure can be expe-

ditioned by the use of steam-douches, and sometimes of iridectomy. He instances cases in which this treatment has given good results, as also that with the albuminates and peptonates of mercury, either rubbed in or injected hypodermically. In herpes of the cornea, Dr. Galezowski has found a good deal of benefit from graduated compression. This he applies by means of an elastic bandage, manufactured for him by M. Galante of Paris, expressly for the purpose.

5. *Galezowski on Thrombosis of the Retinal Vessels in Ophthalmic Migraine.*—M. Galezowski, in a communication to the meeting of the Société de Biologie, on Nov. 26, reported in the *Gaz. des Hôp.* for Dec. 6, said that in 1877 he first demonstrated that ophthalmic migraine is characterised by periodical visual disturbance, hemiopia, scintillating scotoma, with luminous zig-zag, which last from a quarter to half an hour. There presently ensue headache, nausea, vertigo, accompanied sometimes by symptoms of aphasia, pains in the arms or legs, momentary loss of memory, etc. When the attack is once over, the sight is restored to its normal condition; but at the end of one or two weeks, or one, two, or six months, the same crisis re-appears. According to all probability, the case is one of spasmotic contractions of the vessels of the brain and the retina by a neurosis of the vaso-motor nerves. But the frequency of these crises may, in a certain number of these diseases, give rise to obliteration of the vessels and to thrombosis. M. Galezowski has, in fact, up to the present met with this lesion in three of his patients attacked with ophthalmic migraine. In one case a young girl, aged 15, suffered with ophthalmic migraine from the age of seven or eight, and, in one of these attacks, she permanently lost the sight of one eye, in consequence of a retinal thrombosis, presenting all the characteristics of an embolism, but without any cardiac lesion. He met with two similar cases in which the ophthalmoscope showed the presence of a thrombus. A fourth case is still more interesting. A woman, aged 29, lost the sight of one eye in one of the attacks of ophthalmic migraine and aphasic symptoms, etc. The ophthalmoscope revealed partial atrophy of the papilla of one eye; and, in all probability, in this case there was thrombosis of the cerebral vessels. In fine, the researches and cases reported by M. Galezowski bring out the important point that ophthalmic migraine, which has been hitherto looked upon as a purely nervous affection, may, although exceptionally, give rise to obliterations or thromboses of the arteries either of the retina or of the brain.

LITTON FORBES.

TOXICOLOGY.

RECENT PAPERS.

1. CLARKE, T. F.—Cantharides as a Cumulative Poison. (*Lancet*, vol. i, 1881, p. 499.)
2. LUDWIG.—Chlorate of Potassium. (*Four. de Pharm. et de Chimie*, Sept. 1881.)
3. ZUR NIEDEN.—Poisoning by Carbolic Acid. (*Berl. Klin. Woch.*, No. 48, 1881.)
4. LEHMANN, V.—Detection of Poisonous Metals in the Animal Organism. (*Zeitschr. für Physiol. Chemie*, Nov. 5, 1881.)
5. TESTA.—The Alleged Antagonism between Amyl-Nitrite and Chloroform. (*Gaz. Med. Ital.*, Oct. 29 and Nov. 5, 1881.)

6. SCHULTZ.—The Parallelism in the Actions of Coniïn and Curare. (*Zeitschr. für Klin. Med.*, Band iii.)
7. DELAUNAY.—Influence of Nutrition on Poisoning by Strychnia. (*Acad. des Sciences de Paris.*)
8. SMITH.—Chloral in Belladonna-Poisoning. (*Lancet*, Oct. 1881, p. 589.)
9. HENNER.—Tin-Poisoning from Preserved Meats and Vegetables. (*Ibid.*, p. 607.)
10. SMITH, F. PORTER.—On a somewhat Unusual Source of Lead Poisoning. (*Ibid.*, p. 779.)

1. *Clarke on Cantharides as a Cumulative Poison.*—Mr. T. F. Clarke (*Lancet*, 1881, vol. i, p. 499) relates two cases exhibiting apparently a cumulative action of cantharides when administered in small medicinal doses for the cure of gonorrhœa. In the first case, the patient had been taking a mixture for three days, each dose of which contained five minims of the tincture of cantharides. One week after the cessation of the use of the drug strangury set in, and lasted four days. In the second case the patient, after taking two doses only of a similar cantharides mixture, had some of the symptoms of poisoning, viz., frequent desire to micturate, and burning pain during micturition, which was very difficult, and always accompanied towards the end of the process by a few drops of blood. Notwithstanding the continuance of the five-minim doses of tincture of cantharides three times a day, the symptoms rapidly subsided.

2. *Ludwig on Chlorate of Potassium.*—Ludwig (*Four. de Pharm. et de Chemie*, Sept. 1881), having investigated a case of poisoning by this salt, has arrived at the following conclusions. Potassium chlorate appears to act, on the one hand, like phosphorus and arsenic; it is reduced by the blood to the state of potassium chloride, for it can be detected neither in the blood nor in the urine, nor even in the gastric contents; the red corpuscles are destroyed, and other toxic symptoms are developed. On the other hand, the chlorate is decomposed in the kidneys by feebly acid urine into a base and an acid, and the chloric acid thus formed acts in an energetic manner. This singular alleged fact is in opposition to the received views of chemists.

3. *Zur Nieden on Poisoning by Carbolic Acid.*—A case of poisoning by carbolic acid admitted into the medical clinic at Freiburg is detailed by P. zur Nieden (*Berl. Klin. Woch.*, 1881, No. 48), and is of unusual interest, since the patient, a robust woman of 30, swallowed an alcoholic solution of carbolic acid containing 35.8 per cent. of phenol, and recovered. It was ascertained that 12.9 grammes, or nearly half a fluid ounce, of carbolic acid was swallowed, of which 6.7 grammes were subsequently washed out of the stomach; but at least 6 grammes, or about a fluid drachm and a half of phenol, must have been absorbed. Hæmoglobinuria set in within an hour of the ingestion of the poison; and that the urine contained hæmoglobin, was determined by the spectroscope, but no red corpuscles were detected in the secretion. Eight and a half hours after the taking of the phenol, hæmoglobin was no longer detectable in the urine, though a phenol reaction remained for two days. The most prominent symptoms were insensibility within ten minutes, dizziness speedily passing into profound coma, contracted pupils, irregular breathing, irregularity of pulse, extreme cyanosis, vomiting, and depression of temperature (temperature in an hour and half 34.4 deg. Cent. or 94 deg. Fahr.). The chief interest of the case lies in the acute hæmoglobinuria.

4. *Lehmann on the Detection of Poisonous Metals in Animal Organisms.*—Victor Lehmann (*Zeitschr. für Physiol. Chem.*, Nov. 5, 1881) publishes an essay 'On the Best Method of Detecting Lead, Silver, and Mercury in Animal Organisms after Death'. He finds lead in nearly all organisms and secretions after administration of the salts of lead, even such as are with difficulty soluble, such as the sulphate and phosphate. These are more or less absorbed from the alimentary canal. Insoluble salts, such as lead sulphate, are, however, not absorbed. Silver was found in the urine, fæces, bile, and in other organs. The salts undergo reduction after absorption, and the metal is deposited in the organs, as in cases of argyrisms. Mercury was found in all the organs and secretions of the body, after the administration of its preparations. Even such insoluble salts as calomel are absorbed; but in what way was not definitively ascertained. Calomel, however, passes into the lower bowel, chiefly as sulphide, and is excreted in that form in the fæces. To effect the complete separation of lead from the tissues, a previous destruction of the organic matter is necessary. The most delicate test for this metal is sulphuretted hydrogen, by means of which 0.01 per cent. of the metal may be detected, if the solution be alkaline. In the absence of organic matter, nevertheless, lead may be as completely separated by electrolysis as by sulphuretted hydrogen. When the tissues or organic fluids have to be tested for silver, these must first be fused with soda and potassium nitrate, the fused mass lixiviated with water, the residue dissolved in nitric acid, filtered, the filtrate evaporated to a small bulk, and tested for silver with hydrochloric acid, which produces a turbidity with one half to one-fourth per cent. of silver nitrate. The best method for detecting traces of mercury in urine and tissues is that of Mayer, which consists in distilling in a current of steam. By this method one part of the metal may be detected in 10,000 of urine. The electrolytic method of Schneider is more convenient, but not so delicate. The mercury is previously converted into iodide when one part of mercuric chloride may be detected in 1,000 of urine.

T. STEVENSON, M.D.

5. *Testa on the alleged Antagonism between Amyl-Nitrite and Chloroform.*—In this paper Dr. Testa (*Gaz. Med. Ital.*, Oct. 29 and Nov. 5, 1881) gives the results of forty-four carefully conducted experiments on the action of amyl-nitrite in presence of chloroform in animals. The subjects of the experiments were rabbits, and the experiments themselves are divided into four series of eleven each. In the first series the action of chloroform alone is studied; in the second, the influence on the anæsthetic condition of amyl-nitrite; in the third, the influences of varying doses of chloroform; in the fourth, the influence of the amyl-nitrite on arterial pressure. From these experiments, Dr. Testa concludes that the action of amyl-nitrite is to lower arterial tension, to increase the heart-beats, and to render respiration irregular. He believes that its action in chloroform poisoning is not only useless, but positively pernicious, inasmuch as it intensifies the very risks to which chloroform itself is liable. There is, therefore, no true antagonistic or antidotal action between the two substances.

LITTON FORBES.

6. *Schulz on the Parallelism in the Action of Coniïn and Curare.*—This writer has been induced by the great differences in specimens of curare and

curarin to experiment with hydrobromate of coniin as a substitute (*Zeitsch. für Klin. Med.*, Band iii). The effect is similar; paralysis of the motor nerve extremities with slight muscular contractions, as with curare. The heart's action persists to the end; the nerve-centres are not directly affected; and the sensorium, as in the well-known case of Socrates, remains clear till shortly before death. The hydrobromate is readily soluble in water, and keeps better than the pure alkaloid.

JAMES ANDERSON, M.D.

7. *Delaunay on the Influence of Nutrition on Poisoning by Strychnia*.—M. Delaunay has presented to the Académie des Sciences (meetings on Aug. 29 and Sept. 5) the result of experiments made with the assistance of M. Wiet regarding the influence of the greater or less intensity of nutritive phenomena on strychnia-poisoning. *Constitution*.—On injecting the same dose of strychnia into two frogs, one of which was large and vigorous, and the other small and feeble, the phenomena of poisoning were seen to be much more rapid, and particularly more intense in the first than in the second. In the case of recovery, the stronger frog recovered before the more feeble. *Alimentation*.—A frog, which had always been well nourished, was more sensitive to the action of the poison than an anæmic frog, which had been starved for some weeks. *Muscular Power*.—On injecting the same dose of strychnia into two frogs of the same size, one of which moved and hopped for half an hour, it was seen that the latter was sooner and more seriously poisoned than the other. *Position*.—Regarding the position held by the animal; if the same dose of poison were given to two frogs, one of which was suspended by the head and the other by the feet, it was seen that convulsions affected the frog with the head low twenty minutes before the other, and were much more intense. The author is led to believe that the horizontal position may be a cause of death in individuals seriously poisoned, and he questions if it would not be good to maintain them in a vertical position—the head high and the feet low—by placing them in a special apparatus. *Hæmorrhage*.—If the same dose of strychnia were given to two frogs, one of which was previously enfeebled by hæmorrhage, it was seen that the latter was less rapidly and less seriously poisoned than the frog which was untouched. From the therapeutic point of view, if, after having equally poisoned two frogs, one of them were bled, it were seen to return to a normal condition whilst it lost blood. It is known, from the researches of M. Ch. Richet, that large doses of strychnia kill without producing convulsions. If a frog thus poisoned were bled, tonic convulsions, which characterise the first degree of poisoning, were produced in it. *Congestion*.—If congestion were produced in the foot of a frog by burning it with nitric acid, or by inserting pins in its palmar surface, this foot was seen to become convulsed before the other, and the convulsions were also more violent.

8. *Smith on Chloral in Belladonna-Poisoning*.—In the *Lancet*, Oct. 1881, p. 589, Dr. Protheroe Smith reports a case of belladonna-poisoning from inadvertence, the dose being from half an ounce to an ounce of the liniment, which was taken at 5 A.M. The lady was seen at 9 A.M., and a mustard emetic caused free vomiting. She was treated with opium, stimulants, and food. Next day, at 11 A.M., she remained still incoherent, restless, but with a fuller pulse. At this time, half a drachm of chloral-hydrate was given. In half an hour she regained con-

sciousness, and, after enjoying a refreshing night's rest, was next day quite herself again.

9. *Henner on Tin-Poisoning from Preserved Meats and Vegetables*.—Mr. O. Henner, in the *Lancet*, Oct. 1881, p. 607, gives a summary of his examination of a large number of tins of all kinds of meats and vegetables. With the exception of some sausages, all the samples contained more or less tin, many to a very large extent. One of the soups contained 35 milligrammes of tin, one of the condensed milks 8 milligrammes. Tin prevents the lead of the solder from passing into solution; it completely precipitates lead from its solution, an equivalent quantity of tin being taken up. Experiments on animals have proved that stannic compounds are harmless, but that tin, in the stannous condition, is a virulent poison. These facts demand attention, and make it desirable that another substance should be employed to form the receptacles of preserved meats and vegetables.

10. *Smith on a somewhat Unusual Source of Lead-Poisoning*.—Mr. F. Porter Smith draws attention (in the *Lancet*, Oct. 1881, p. 779) to the fact that wine may be contaminated with lead from some of the shot used in washing the bottles being allowed to remain.

R. NEALE, M.D.

REVIEWS.

The Other Side of the Opium Question. By W. J. MOORE, L.R.C.P., M.R.C.S., L.S.A., Deputy-Surgeon-General H.M. Forces, Presidency Division, Bombay, Honorary Surgeon to the Viceroy of India. London: J. and A. Churchill. 1882.

THE agitation on the so-called opium question continues to excite such interest, that reliable addition to our knowledge of the subject will be read with avidity. Deputy-Surgeon-General Moore is already well known as an authority on the subject, and the re-issue of the papers which recently appeared in the *Indian Medical Gazette* will be welcomed by a large circle of readers. In the February number of the *Nineteenth Century*, Mr. Storrs Turner asserts that no French or German medical man, no single Chinese authority, can be quoted to testify to the innocence of opium; and that there is no country in the world in which the habitual use of opium is regarded as anything but a dangerous vice. In Mr. Moore, he will find an uncompromising opponent, who considers that the moderate use of opium is not only legitimate, but, under many circumstances, beneficial both in health and disease.

The 'effects of opium', as depicted by non-professional writers, are familiar enough to us all. Thus Sirr says, 'Physically, the effects of opium on the enslaved victim is almost beyond the power of language to portray. It not only enslaves its votaries, but destroys their bodies, and commits such fearful ravages in its progress, that the mental powers are wholly paralysed, and the consumers are conducted onwards from one crime to another. The habitual use of this drug terminates the smoker's life in about five years, and he may readily be identified by his lank and shrivelled limbs, tottering gait, sallow visage, feeble voice, and death-boding glance of his eye. These are so superlative in their degree, and so closely blended in their union, that they at once bespeak him to be the most forlorn creature on the

face of the earth.....A few days of this fearful luxury, when taken to excess, will impart a pallid and haggard look to the features; and a few months, or even weeks, will change strong and healthy men into little better than idiot skeletons. The pain they suffer on days without the drug, after long habit, no language can explain.' It must be admitted that the effects of an excessive use of opium are scarcely exaggerated in this description; indeed, the fact that opium eventually induces bowel complaints, such as diarrhoea and dysentery, and that it is the frequent cause of rheumatic pains, might have been added to complete the sensational picture; but that such results follow other than the excessive use of opium is not true. The career of a drunkard has been sketched in quite as forcible a manner, but not even the most enthusiastic teetotaler would affirm that the description of the drunkard is applicable to all who use fermented liquors. Then, again, there is reason to believe that the maladies for which opium is taken have been regarded by unprofessional observers as diseases caused by opium. The Chinese, as is well known, are very subject to scrofulous sores, especially the poor and needy. Want and pain cause such persons to take opium. Casual observers, not being able to distinguish scrofulous sores from other ulcers, jump to the conclusion that they are due to the opium. Such, too, is the case with regard to skin-diseases and numerous other complaints, opium being credited with producing that condition for the relief of which it is taken.

It has been frequently stated that the habitual use of opium terminates life in about five years. This, according to our author, is absolutely untrue. He is personally and intimately acquainted with natives of India who have taken opium from boyhood, and who at forty, fifty, and even the grand climacteric of sixty-three, are as hale and hearty as any of their fellows. He speaks of a servant of his, who had been an opium-eater from his youth upwards. He contracted the habit in the first Afghan war; but he marched thousands of miles, year after year, over the sandy deserts of Western Rajpootana. Although the opium-pipe was his only solace, he never neglected his work, or failed to appear at that unpleasant hour in the very early morning at which long marches rendered rising a necessity. Opium-smokers are found amongst some of the most physically powerful men in India, men who will ride their fifty, eighty, or even a hundred miles under the burning sun of the 'Land of Death', as Marwar, from its sterile sandy aspect, has been called. To the 'Kossid' obliged to travel long distances in a short space of time, opium is invaluable. The court 'hurkarus' are celebrated for the distance and speed with which they travel. They go without food and water, and they abjure sleep, being supported to their journey's end by an occasional pill of the opium they carry in a small box. When used by the impoverished 'ryot', it fills the void resulting from insufficient food, and affords him, not only a taste of that exhilaration of spirits which in other countries might be obtained from the use of alcohol, but enables him to undergo his daily fatigues with far less waste of tissue than would otherwise occur.

Again, we are told that 'atra cura' is the consequence of indulgence, that opium depresses the spirits, rendering its victim melancholy, and not unfrequently imbecile or even insane. Such, however, is not the case. De Quincey says:—'For ten years, during which I took opium, the day succeeding was always a day of unusually good spirits.' And he

tells us that opium, instead of producing inactivity or torpor, often led him to frequent public places, such as markets and theatres. Doolittle says: 'Friends often invite each other to smoke opium as a preliminary to the discussion of business'—the reverse of our custom at home, where the glass usually follows business. It is hardly likely that the Chinese would use opium just before business discussions, if opium dulled the intellect.

Perhaps the worst feature about opium is the frequency with which it is given to children—a custom which prevails not only in China, but to a large extent in India also. Here, again, excuse may be pleaded, for the poor natives have not that opportunity which mothers in Europe enjoy of giving their children opium under the legalised patent-medicine guise of 'soothing syrups', 'cordials', or 'elixirs'.

On the whole, Deputy-Surgeon-General Moore has made out a very good case for 'the other side of the opium question', and his work is well worth careful perusal.

WILLIAM MURRELL, M.D.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. London: H. K. Lewis. 1881.

WE never take up a book of this kind without experiencing a feeling of uncertainty whether it expresses or fulfils any actual need. As a commencement, we try to place ourselves in the position of author, and to estimate the reasons of its matter and arrangement, and we confess to being unable to picture satisfactorily how it would be possible to set about such a book, and plan out the scheme for its accomplishment. Where to begin we should not know, and where to end would find us equally in hesitation, if not in despair. To many students, moreover (for whom we may assume it is intended), we do not think that the book will be helpful. If there be such a thing as a good memory—as distinct from a good understanding—that is to say, a power of remembering isolated facts stripped of many of their associations—to such it may appeal and find its service; but to many others, we are persuaded, it will only be a dictionary of disease, and that necessarily an incomplete one.

These remarks will indicate the position which, we think, in the interests of medical education, books of this kind should occupy; they should fulfil that part of the author's object which aims at providing the student with a general introduction to the study of medicine. At the very outset of his career, when going round the wards, any one may well take this volume in his pocket, and hearing for the first time terms employed, which are in an unknown tongue to him, he will find all the information he is capable of utilising at the moment, and of carrying away with him. *The Elements of Medicine* will be really useful under such circumstances. But when the author develops the remainder of his object as being to bring the essentials of the subject, 'so far as required for the ordinary medical qualification', within the grasp of those who are not disposed, or have not the leisure, to read the large and complete works, such as those of Aitken, Bristowe, Niemeyer, and Roberts; and further expresses his opinion that this class of readers—more appropriately, we think, non-readers—meets with too little sympathy, we are bound to part company with him. Not altogether it is true; for we hold, in common probably with the author, that the best education a student can obtain is to be got by taking a small text-book, and spending the difference of the time, with compound inte-

rest, at the bed-side. But the student who devotes himself to observation in the wards is not the one who has no time to read large books, if he be so minded. Ward work is no easy exchange for book work; it is a royal road of lengthy procession, of much toil; and we would venture to say that those who are not disposed, or have not the leisure, to read Bristowe or Roberts, ought to be cashiered at once; for if they hear not one of them, neither will they be persuaded to work in the wards.

Of the matter of this book we have nothing to say. Elementary works are always open to criticism, which is generally undeserving; for they are nothing if not dogmatic. We are disposed to look more at the work itself. We know that to write it must have been infinitely more troublesome than any larger book; and Dr. Carter appears to have fulfilled his purpose, so far as we can define it, with precision and discretion; and within the range which we have indicated it deserves success.

JAMES F. GOODHART, M.D.

Medical Electricity: A Practical Treatise on the Applications of Electricity to Medicine and Surgery. By ROBERTS BARTHOLOW, A.M., M.D. LL.D. London: Henry Kimpton. 1881.

PROFESSOR Bartholow is an excellent authority on this subject, and can boast of much practical experience, as well as extensive reading. He is a clear and practised writer, and his account of the principles of electro-physics, electro-physiology, and electro-diagnosis, is unusually compact and readable. His chapters on electro-therapeutics include a discussion of electricity in the treatment of cerebral affections, spasm, and cramp, the paralyses, pain, anæsthesia and analgesia, vaso-motor and trophic neuroses, constitutional diseases, and local, other than nervous, diseases.

The chapter on static electricity and its therapeutical applications is one of the least satisfactory in the book, the authors quoted being of older date, and no reference being made to the most recent applications of static electricity by the French school of electricians.

Reasonable development is given to the development of electricity in surgery; and, on the whole, we can recommend this little treatise in a very warm manner.

The Mother's Guide in the Management and Feeding of Infants. By JOHN M. KEATING, M.D. London: Henry Kimpton. 1882.

THIS excellent little treatise aims at supplying, in a more intelligent fashion, the want which used to be felt by the old monthly nurse. The mother who learns from this book how to watch nature, and how to fulfil the duties of the nursery, will be well instructed and self-dependent. Such subjects as the diet of the mother, bottle-feeding, choice of food, the bathing of children, the use of laxatives, and other general nursery rules, are treated with excellent judgment, and in concise and clear language.

A Manual of Ophthalmoscopy. By Dr. DAGUENET. Translated by C. S. JEAFFRESON, F.R.C.S. London: J. and A. Churchill. 1880.

THIS little book is intended, as its title-page denotes, for beginners in ophthalmology. It has the characteristic merit of all French books, that of

being very clear and concise. The translation is well done. It is doubtful, however, if the word purple conveys to the English mind the exact idea of the colour employed as the second test (IIa) in Holmgren's method for detecting colour-blindness. The account of optic neuritis is one of the best parts of the book; indeed, this commendation may be extended to the chapter on affections of the optic nerve generally. In respect of the remaining subjects treated, their brevity and precision will constitute their chief recommendation to English readers.

W. A. BRAILEY, M.D.

The Ophthalmic Review. Edited by KARL GROSSMANN and PRIESTLEY SMITH. London: J. and A. Churchill.

THE first number of this periodical publication, dated November 1881, is now before us. Its principal aim, as indicated in the preface, is to supply every month abstracts of the various recent articles, English and Continental. Numerous publications in German, French, and English—among the last of which we may rank our own, and among the former the *Centralblatt* of Hirschberg—cover the same ground. We may, however, welcome one more, and wish it success. Such publications cannot fail to be of service to those who wish, with little labour, to have a general acquaintance with the literature of the day.

W. A. BRAILEY, M.D.

Proposed Reforms in the Coroner's Office. By CLARK BELL, Esq. New York.

Address delivered before the Massachusetts Medical-Legal Society. By ROBERT AMORY, M.D. *Boston Med. and Surg. Jour.*, Nov. 22, 1881.

The Office of Coroner. *Brit. Med. Jour.*, Jan. 14 and 21, 1882.

THESE papers contain interesting reviews of the modes adopted in various countries for holding inquisitions on dead bodies where death may possibly not have been the result of natural causes. Preference is given to the new system adopted by the Legislature of Massachusetts, in which State of the Union medical examiners have for all practical purposes superseded the old coroners. The medical examiners are required by law to be 'able and discreet men, learned in the science of medicine'. After four years' trial, Dr. Amory claims the following advantages for this new system. 1. The investigation of the cause of death after supposed violence is unattended with the disagreeable and harassing circumstances of partial publicity, which were necessary under the old coroner's system. 2. A more certain and definite knowledge of the cause of death is obtained. 3. An inquest is held under a magistrate, who presents his verdict without the inconvenience of a jury. 4. A written and detailed account is received from both medical and judicial examiners, which forms a more convenient record for use by the district attorney in presenting the case before the grand jury. 5. There is a financial saving to the treasury of the counties. 6. An opportunity for the study of pathological science is afforded.

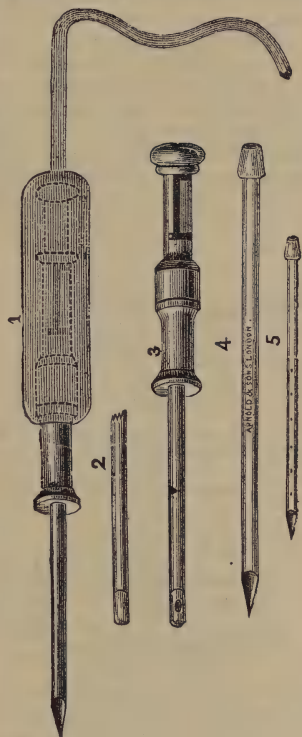
The pamphlet of Mr. Clark Bell, and the articles in the *Brit. Med. Jour.*, both contain details of the working of the Massachusetts system.

THOS. STEVENSON, M.D.

NEW INVENTIONS.

COUSINS'S NEW ANTISEPTIC TROCAR.

This new trocar, which is introduced to the profession by Dr. Ward Cousins, is a very simple and handy instrument. The special feature in its construction is that it is perfectly air-tight, and can be opened and shut within an India-rubber case (see Figs. 1, 2, and 3). It is composed of two metal tubes: the outer carries a pen-shaped lance, and the inner is round at the point, with a lateral opening. By a bayonet joint the trocar is opened and shut, at the same time the point of the lance is protected from injuring any internal part. The orifice and joints are introduced into the enlarged end of the India-rubber tube, which is slipped over a metal block, and then secured by a ring; and this serves for a handle to



the instrument. It is adapted for all kinds of tapping; it can be used also for exploring or injecting purposes; or it can be very readily attached to the exhausting apparatus of the aspirator. The trocar is manufactured by Messrs. Arnold and Sons of West Smithfield, in three convenient sizes.

Dr. Cousins states, in a medical contemporary, that he has employed it in every variety of operation, and with special advantage in cases of paracentesis thoracis, as the opening and closing action within the India-rubber case is very readily accomplished, and the necessary movement can be easily performed by anyone after a little attention to the construction of the instrument. Fig. 4 represents a simple form of exploring tube to which an India-rubber bag can be adjusted. The capillary drainage-tube (Fig. 5) is intended for the treatment of anasarca; it can be left in the subcutaneous tissue without any risk of injury to the deeper parts, and its position can be altered without another puncture of the skin.

DR. WARD COUSINS'S EAR-PROTECTOR.

This simple little contrivance, of which we append an illustration, is admirably adapted for the use of those persons who require protection of the ear. Dr. Cousins's invention is an India-rubber, and consequently elastic, cushion, which is instantly adjusted



in the orifice of the external ear. It does not suspend the sense of hearing, but merely modifies or reduces the intensity of sound; and it also prevents a sudden shock of noise or cold upon the drum of the ear, which, in some temperaments, is followed by deafness, giddiness, and noise in the head. This ear-protector is especially adapted for swimmers, divers, and all who suffer from aural disturbance after bathing; and it will be found an efficacious remedy for such contingencies by all those who are daily working in the noise of factories, by soldiers or artillerymen exposed to the blast of cannon or firearms, and by sailors and travellers against severe cold and wind. It is made in five sizes, to suit the varying capacity of the auditory canal, is much more sightly than the inconvenient plug of cotton-wool frequently employed, is pleasant to sensation, and may be safely used by all persons who suffer from aural weakness and its attendant inconveniences. It is manufactured solely by Messrs. Lynch and Co., Aldersgate Street, E.C., and is practically everlasting in wear.

A NEW TRACHEOTOME.

Drs. Hale White and Walter Edmunds have designed a new knife for facilitating the operation of tracheotomy; they call it the tracheotome. One difficulty in the operation is always the introduction of the tube; the operator may pass it in front of the trachea, or miss his opening, and have to make a second, and may lose valuable time, and only suc-



ceed after several attempts. To obviate these difficulties, the knife shown in the accompanying cut has been devised. It resembles somewhat a pair of dressing forceps; at that end of the instrument which is to be introduced into the trachea, one of the blades has, at its lower half-inch, a cutting edge, and is shaped like an ordinary scalpel: the other, narrow and blunt, lies, when the instrument is closed, in contact with the cutting blade, and well behind its edge. At the handle the blades are widely separated, roughened to give the operator a better hold, and connected by a catch and spring, enabling them to be fixed at any degree of approximation. The method of using the instrument is as follows. The trachea having been exposed, either by the cutting edge of this instrument, or an ordinary scalpel, the instrument is held, with the cutting edge upwards towards the patient's chin and the trachea

opened in the usual manner, the instrument is held in position, and its two handles are pressed together, and the two blades thereby separated, thus widening the tracheal opening, the catch holding the handles in the position to which they have been brought. The patient can now breathe easily. The trachea being held widely open by the 'tracheotome', the child should be allowed to expel any membrane it can, and the surgeon has ample opportunity of inspecting the back of the trachea, and of removing any loose membrane seen lying there. An ordinary tracheotomy tube can now be introduced with the greatest ease between the two widely-separated blades in the trachea, and they can be withdrawn as soon as the tube is in position. The advantage claimed for this instrument is that the operator never loses his hold on the first opening he makes in the trachea. It is made by Messrs. Millikin and Down.

A NEW URETHRAL BOUGIE.

Dr. A. Van Derveer of Albany, New York, writes, in the *New York Med. Rec.* of Dec. 1, 1881:—'Having had excellent results from the use of the instrument illustrated by the accompanying cut, I feel it proper to call the attention of the profession to it. In the treatment of urethral stricture by gradual dilatation, and in those cases where it became necessary to maintain the calibre of the urethra after internal urethrotomy, or rapid divulsion, I have realised for a long time that the fixed curve of the steel sound gave unnecessary pain, and that the soft olive-pointed bougie, by passing two or more inches farther into the bladder than was required, gave to that organ a shock and an irritation which, in addition to being very disagreeable to the patient, incurred also the dangers of possible cystitis, with its complications.'

'Acting upon the knowledge of the fact that we seldom, if ever, meet with a stricture in the prostatic portion of the urethra, I had made, two years ago, by Messrs. Tiemann and Co., light metal urethral dilators, of the average length of the spongy and membranous portion of the urethra—about eight inches—and in sizes ranging from Nos. 10 to 42 of the French scale. These were found very serviceable, being used by patients with safety and success. Later, as an improvement on the above described instrument, I had made, in different sizes, the solid rubber urethral bougie, which gives the least possible pain on passing. These bougies were also made by Tiemann and Co., who are now prepared to furnish them singly or in sets.'

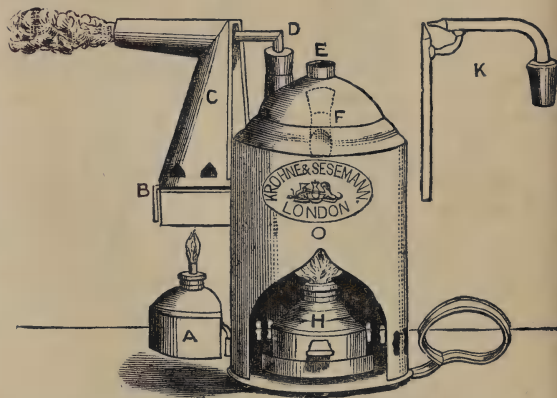
'Believing them to be the safest of all bougies, and knowing from actual use that they are the most serviceable, I present them with confidence to those of my brethren who have cases, in the treatment of which such an instrument is indicated.'

A NEW MERCURIAL SPRAY AND FUMIGATOR, AND UNIVERSAL STEAM INHALER.

The accompanying woodcut represents an inhaler, which Mr. Francis G. Hamilton, Assistant-Surgeon to the Central London Throat and Ear Hospital, has

been using for more than two years, both in private and in hospital practice. He originally designed it for a case of severe relapsing syphilitic ulceration of the vocal cords, which refused, for more than three years, to yield to any of the ordinary methods of treatment used in such cases. The result has been most satisfactory, the patient's larynx remaining quite sound up to the present time.

In the illustration, G is the boiler, H the lamp for heating it, and E a tube which passes through the boiler to its under surface, in order that an increased heat-area may be obtained. F is a small tube, closed by a cork, through which the boiler is filled; and it is placed on one side of the boiler, so that, should the cork by any chance blow out, the water and steam would not come in the face of the patient using the instrument. D is a 'knee-tube', passing into the boiler through a movable vulcanite cork; and the point of the tube, through which the steam from the boiler comes, projects only a short distance, and through a largish opening, into the sublimer C. B is a small drawer, forming the floor of the sublimer, and on which the calomel is placed. A is the lamp for subliming the calomel, or other drug used. Both D, C, and A are easily removed; and, if steam and mercurial vapour be not required, but a Siegle's spray, it is only necessary to remove them, and put the glass tubes marked K in the place of D, and the long limb of K in a bottle containing the medicated solution.



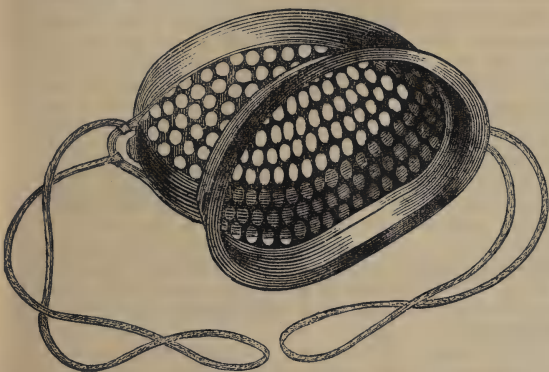
There are some precautions necessary in using calomel inhalations. 1. The calomel should be re-sublimed calomel, and not such as is ordinarily used internally in medicine. This is important, as the ordinary calomel is often very irritating for inhalation, owing to the impurities which it contains. 2. The quantity of calomel used should at first only be small, about two to five grains; and it can afterwards be increased to ten grains, if necessary. 3. The patient should never be urged to use more than he can bear without much coughing, and this is especially the case on first using it, when it is as well that he should not take more than two, three, or four inspirations; and, after a day or two, he will be able to tolerate it much better. In using the instrument, the lamp A should not be lighted until the steam is coming off freely from the boiler, or the steam may be dried off as it is emitted, so as to get a dry instead of a moist inhalation, which, in the experience of Mr. Hamilton, is far more irritating.

It will be seen at once that the apparatus can be used as a local fumigator for any part of the body; e.g., for ulcer of the leg, as well as for the larynx.

The apparatus has been made for Mr. Hamilton by Messrs. Krohne and Sesemann, of Duke Street, Manchester Square, and costs six shillings.

SAUNDBY ON ANTISEPTIC INHALATIONS IN PHTHISIS.

DR. SAUNDBY, Assistant-Physician to the General Hospital, Birmingham, finding that the use of antiseptic inhalations has proved useful in phthisis in his practice, and also in that of Dr. Sinclair Coghill, who has had special opportunities for estimating the value of treatment in this malady, has endeavoured to improve the necessary apparatus as far as possible. He has been using during the last year an inhalation respirator made for him by Mr. Best, instrument maker to the General Hospital, of Summer Lane, Birmingham, and which is figured in the accompanying woodcuts.



The naso-oral form, which Dr. Saundby has employed almost exclusively, is very well shaped, is light, comfortable, well ventilated, and worn by patients without complaint of inconvenience or fatigue. The antiseptic he has found most suitable is the oil of eucalyptus, in doses of five to ten drops poured on the flax twice daily.

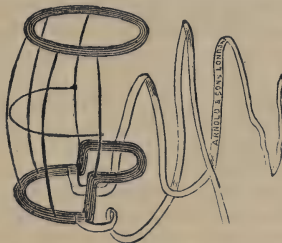


Dr. Saundby does not claim, nor does he think it can be rationally expected, to cure any cases by

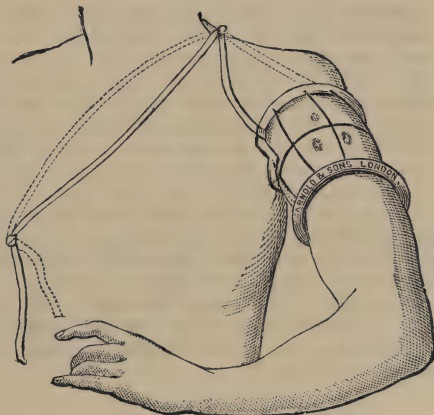
the use of these respirators; but many of his patients have found great relief from their use, mainly by checking purulent secretion and allaying cough.

DR. J. C. HOGAN'S VACCINATION SHIELD.

The Vaccination Shield, of which the annexed is an illustration, was devised by Dr. John C. Hogan, at the time when the recent small-pox epidemic in London was causing considerable uneasiness, to obviate the pain and inconvenience attended on the rubbing or adhesion of the sleeve to the vaccinated



part. This it satisfactorily accomplishes; and, moreover, as, from its construction, no pressure is made either above or below the part operated on, no hindrance to the free circulation of the blood occurs, an advantage which he thinks will recommend it for



use in cases of vaccination or adult revaccination. It is made in various sizes by Messrs. Arnold and Sons, West Smithfield, E.C.

TRICYCLES.

The use of tricycles is, we are glad to see, rapidly becoming more general amongst all classes. The rapid extension of the masses of bricks and mortar which constitute our enormous cities, makes it difficult to reach green fields or breathe fresh air by the use of the means of locomotion given to us by nature, but the happy possessor of a tricycle or bicycle, independent of distance, spins off on his iron horse, soon to reach green fields and pastures new. Indeed, we look upon the strings of tricycle and bicycle riders now to be met with on fine evenings and half-holidays, making their way to the suburbs of London, as a very healthy sign of the time. These iron horses give their riders the opportunity of spending time healthfully, and gaining physical and mental strength, when they would probably, but for the facilities afforded by this method of locomotion, be

spending their time in some crowded theatre or music-hall reeking with the fumes of tobacco.

In the country, also, tricycles and bicycles are frequently used for sending messages to the nearest town, railway-station, or neighbouring houses; as, even where horses are kept, it is found to be quicker to send a lad on a bicycle than to saddle a horse. In some districts they are coming into use for medical men and their assistants to go their rounds. They are beginning to be patronised by the country clergy; and for some time postmen in many rural districts have been provided with these machines, for hastening the delivery of their letters. The makers of bicycles and tricycles, finding that their wares are daily becoming more in demand, are naturally constantly adding improvements to ensure the desiderata which their productions should possess; such requisites being, in brief, rapid travelling, speed on dry roads, and lightness and facility of propulsion on soft ones, with power of climbing, and of turning in a small circle. Tricycles are now coming much into use, as they do not demand the same power of poisoning oneself accurately and of agility in mounting and dismounting as the bicycle requires. Most persons of ordinary activity can manage a tricycle, and attain the very satisfactory pace of ten miles an hour. A greater speed may be attained by a bicycle rider, but, as we have already pointed out, the difficulties of management, and the risk of an occasional fall, are more considerable, the third wheel of the tricycle giving greater steadiness to the machine, though at some sacrifice of speed. However, whether bicycle or tricycle be chosen, it is certain that the use of either will add materially to the health and enjoyment of the rider; and we shall be glad to know that, by the extension of bicycle and tricycle clubs, and other facilities for the purchase or hire of these machines, that every one who cannot afford to keep or hire a horse, yet gets his iron-horse exercise as a regular relaxation after business-hours or at holiday seasons. The Royal family, we learn with pleasure, have extended their patronage to this form of exercise; tricycles have been supplied to the order of Her Majesty and the Princess Beatrice, and the Prince of Wales has, at the recent Sportsman's Exhibition, chosen a tricycle similar to those used by the Stanley Club.

MISCELLANY.

DR. THEODOR SCHWANN, Professor of Physiology in the University of Liege, died at Cologne on January 11, at the age of 71. He was celebrated as the first exponent of the doctrine of cell-formation in animals.

A BUST of Dr. Protheroe Smith, the founder of the Hospital for Women, Soho Square, was recently presented to the institution by friends and patients, and was unveiled on the 15th ult. by Sir Rutherford Alcock, K.C.B., the Chairman of the Committee of Management, on being placed in position in the hall of the hospital. The work has been well executed by Mr. Belt.

FEMALE DOCTORS IN RUSSIA.—Twelve female doctors are now officially engaged in teaching medicine to women. Thirty are in the service of the Zemstvos, and forty others serve the hospitals. Twenty-five female doctors who took part in the military operations of 1877 have been decorated, by order of the Emperor, with the order of St. Stanislas of the third class. The number of female students is steadily increasing.

FEMALE PHYSICIANS IN AMERICA.—There are at the present moment nearly four hundred female physicians in active practice in twenty-six of the United States, the majority of them being settled in New York, Massachusetts, and Pennsylvania. These figures show a very rapid increase in the number of women practising medicine in the United States. A few years ago a lady doctor was more or less a *rara avis*; now there is scarcely a village in any one of the Eastern States which cannot boast of at least one such practitioner.

MR. STORRS TURNER, Secretary to the Society for the Suppression of the Opium Trade, writes to ask us to print an extract from a letter written by Dr. Kane, who was quoted in the LONDON MEDICAL RECORD for Jan. 15. The extract is as follows: 'Two smokers, one American and one Chinaman, have died here (New York), within ten days, from acute purulent peritonitis resulting from the bowel irritation and prolonged constipation incident to the practice of the vice. In the case of the American, Dr. Kane held a very full and satisfactory autopsy, the details of which he promises to Mr. Storrs Turner soon.'

THE TEMPERATURE OF SICK ROOMS.—In the *Lancet*, September 1881, p. 390, an allusion to the well-known difficulty experienced during the illness of the late President General Garfield, to keep the room cool, it was suggested that the plan adopted, of placing blocks of ice about the chamber, afforded the readiest mode of securing the desired result. At p. 574, this suggestion is criticised, the writer showing that the blocks of ice, thus placed, were exposed to the lowest and therefore coolest stratum of air, where also but little movement of the air took place; whilst, by means of the Chemical Lung or Punkah, lately exhibited at the International Exhibition, charged with iced water, pure or medicated, waving to and fro from the ceiling, the temperature of the hottest room, with an atmosphere of the foulest kind, could be most rapidly cooled and purified.

THE MUSCULAR FORCE OF A CROCODILE'S JAW.—An experiment has been lately made in Paris by Drs. Regnard and Blanchard on the measurement of the power exerted by the masseter muscle in a crocodile. Ten live crocodiles of the species *C. galeatus* or *siamensis*, that had been sent in large cases from Saigon to M. Paul Bert, afforded the opportunity for such experiments. Some of these animals were as much as 10 ft. in length, and weighed about 154 lbs. The difficulty of managing such creatures in the laboratory was, of course, considerable. The crocodile was fixed with ropes on a heavy table; the lower jaw kept in contact with the table by a cord, while the upper was raised by means of a cord attached at the extremity and passing up to a beam overhead. A dynamometer was inserted in this cord, and was affected when the animal was stimulated with an electric current. In this way, a crocodile of about 120 lbs. weight gave an indication of 308 lbs. (140 kilogrammes). The application of the cord at the end of the snout was necessary but unfavourable, seeing the application of the force is thus at the end of a long lever, and there is at least five times more space between this point and the insertion of the masseter muscle than between the latter and the joint of the jaw—the fulcrum. Hence the masseter really produces a force five times that indicated by the dynamometer, or about 1,540 lbs. (700 kilogrammes). This extraordinary force, it should be remembered, was that of an animal somewhat weakened and at a low temperature. The force (of about 308 lbs.) is really applied at the end of four large teeth that project beyond all the others, and, considering the surface here represented, the authors estimate the pressure, while the bite is executed by the extremity of those teeth, at nearly 400 atmospheres. Making similar experiments with an ordinary sporting dog, they obtained in the dynamometer a pressure of about 72 lbs.; while the effect at the insertion of the masseter was about 360 lbs. The pressure at the point of the canine teeth would be about 100 atmospheres. It is calculated that the crocodile is about one-third stronger than a dog of the same weight would be.

The London Medical Record.

COBLENZ ON THE EMBRYOLOGICAL ORIGIN OF OVARIAN, UTERINE, AND VAGINAL CYSTS.

DURING the past year, Dr. Hugo Coblenz of Halle has written some valuable contributions to well-known German periodicals.* In these papers he establishes a more precise and regular relation between cystic tumours in the female pelvis and the development of the female organs of generation, than has hitherto been recognised. His observations are based on a thorough knowledge of the ultimate involution of the Wolffian body and its duct, a knowledge based on careful dissection rather than on tradition.

The transformations of Müller's ducts and their partial fusion, until they ultimately assume their adult form as Fallopian tubes, uterus, and vagina, have little to do with the present subject. In a review of the labours of Professor M. Watson, in the LONDON MEDICAL RECORD of 1879, the researches of that anatomist, and of others, on the development of the middle and external female organs were sketched at length. The partial obliteration of the Wolffian body was discussed in the same review, but chiefly from a morphological point of view. In the human female, a number of parallel and almost vertical tubes are to be seen in the segment of broad ligament between the Fallopian tube and the ovary. These tubes constitute the parovarium; above, they join a horizontal tube which is blind internally, and ends externally in a cyst-like dilatation sometimes as large as the hydatid of the Fallopian tube, with which it must never be confounded. Inferiorly, the tubes are apparently lost in the ovary. The microscope, however, has detected, beyond any doubt, distinct relics of the Wolffian tubes in the tissue of the hilum of that organ. In the normal adult human female, no trace of the Wolffian body can be found between the layers of the inner part of the broad ligament; but Coblenz and others have observed that, until late in fetal life, all this region shows parallel tubes, with a single straight tube above, continuous with the outer or permanent 'parovarium'. The excretory duct of the Wolffian body is totally obliterated in the human subject, excepting in very rare monstrosities, where it remains, a homologue of the duct of Gaertner persistent in certain female mammals. It runs, in such cases, into the walls of the uterus, and has even been known to open, unobstructed, close to the clitoris, after descending the vaginal wall. The origin of both uterus and vagina from the fusion of Müller's ducts, to which the Wolffian duct becomes adherent, explains this teratological phenomenon. In horizontal sections of the uterus of a seven months' human foetus, the Wolffian ducts are plainly visible. In fetal kittens, they are as readily to be seen in horizontal sections of the

vagina, lying in the substance of its anterior wall, close to the urethra.

Putting aside embryology for a time, Dr. Coblenz proceeds to classify the different varieties of cysts originating in the female organs. He divides them into: 1. True ovarian cysts; 2. Cysts of the hilum of the ovary; 3. True parovarian cysts; 4. True cysts of the broad ligament; 5. Para-uterine cysts; 6. Paravaginal cysts. All but the first-class are related in origin, according to Dr. Coblenz, to the Wolffian tube and its duct.

1. The true ovarian cyst is developed wholly and solely from the tissue of the parenchyma of the ovary, the seat of the Graafian follicles, themselves frequently dilated ('hydrops folliculi'), or dilated and fused ('oligocystic tumour'). The true ovarian cyst is typically multilocular, with a strong tendency to the development of abundant glandular outgrowths from the inner walls of the secondary cysts. When papillary growths are also detected, this denotes a fusion with certain elements which are the origin of the next variety. The Fallopian tube and broad ligament lie quite distinct from the true ovarian cyst, which has a pedicle often of considerable length. The origin of this kind of cyst is still much disputed. Dr. Coblenz does not enter deeply into this question. The involution of certain Graafian follicles, never perfectly matured, may end in morbid changes, either becoming the corpora fibrosa of Patenko and others,* or undergoing a hyaline or colloid change, which, according to researches made by Dr. Vincent Harris and the reporter,† may be the starting point of the multilocular cyst. The 'colloid degeneration of the stroma', to which these cysts were attributed by Rindfleisch and others, not many years ago, was an appearance described before the involution of the follicles was clearly understood, and was insisted upon by certain pathologists, who might have erred through over-eagerness, in attempting to prove that true ovarian cysts cannot originate from Graafian follicles in any stage of evolution or involution. Noeggerath believes that the true ovarian cyst arises from thickened, dilated, and obstructed blood-vessels. It is, at least, certain that the arterioles of the ovary are subject to a hyaline change, which reduces them to bodies hard to distinguish from degenerate follicles. Patenko and Noeggerath both admit this fact; Dr. Harris and the reporter have a large series of microscopic sections, figured in their monograph, where the resemblance can be traced very distinctly. They found this vascular change so often in considerably enlarged ovaries that were fellows to multilocular ovarian cysts, that they could not deny the possibility of a vascular origin of the cysts themselves.

2. Cysts of the hilum of the ovary are developed in the vascular tissue of the hilum, which contains epithelial and sometimes tubular relics of the Wolffian body. These cysts are generally multilocular, and from their inner walls grow masses of papillary outgrowths. Owing to their origin, they are almost or entirely sessile, but separate from the tube and broad ligament. In some cases, however, they force the layers of that ligament apart, as do the next two varieties, and grow up to the tube. Dr. Coblenz insists on the origin of these and of all the remaining varieties from relics of the Wolffian body. Last spring the reporter exhibited, before the Pathological Society, the ovary of a seven months' foetus,

* Das Ovarialpapillom (Virchow's Archiv, Band lxxii), Zur Genese und Entwicklung von Kystomen im Bereich der inneren weiblichen Sexualorgane (ibid., Band lxxiv), Die 'papillären' Adenokystenformen in Bereiche der inneren weiblichen Sexualorgane und ihre Behandlung (Zeitschrift für Geburtshilfe und Gynäkologie, Band vii, Heft 1). Zur Ovariectomie (Archiv für Gynäkologie, Band xviii, Heft 2).

* LONDON MEDICAL RECORD, 1881, p. 441.

† Journal of Anatomy and Physiology, July 1881.

which contained several cysts filled with papillary growths.* Comparison with the tissue of the hilum in the opposite ovary, convinced him of the true origin of these growths. The Wolffian element of the morbid ovary had become hypertrophied instead of atrophied, and completely checked the development of the parenchyma. As already observed, this second form of cyst may be combined with the first, as a glandular and papillary multilocular cyst.

3. True parovarian cysts are now well known to English pathologists. A good series of diagrams are to be seen in a paper by Dr. Bantock,† quoted by Dr. Coblenz, who has arranged the illustrations of the comparative relations of each kind of cyst on the plan followed in those diagrams. Parovarian cysts are typically unilocular, with no growths from their inner walls, and contain a clear watery fluid, instead of the glairy coloured contents of the first two varieties. They lie between the folds of the broad ligament, pushing up as far as the Fallopian tube, which thus comes to lie on the outer wall, with its fimbriæ widely stretched. The ovary hangs below them, generally, as the reporter has observed, flattened and atrophied, but sometimes absolutely unaffected. The segment of tube and broad ligament, internal to the parovarium, makes a good pedicle to these cysts. When the so-called parovarian cyst contains papillary growths, as in a specimen now in the museum of the Royal College of Surgeons, and taken from a case that died of tetanus after operation, its origin from the parovarium is tolerably certain, as it differs in no respect from the cysts developed from other parts of the Wolffian relics. It is otherwise with the commoner variety, which bears no intracystic growths. Small cystic bodies, perfectly spherical, are often detected lying between the layers of the broad ligament over the tubes of the parovarium, yet apparently separate from that structure. The lining membrane of the common 'parovarian' cyst being identical with that of the tubes of the Wolffian body, Dr. Coblenz insists on its origin, like the hilum cysts and those about to be described, being truly Wolffian, possibly from detached loops of the tubes of the parovarium. Certainly a cyst in the glandular substance of the kidney, clearly separate from the uriferous tubules, would still be called a renal cyst; in this manner a cyst among, but distinct from, the tubes of the parovarium, should be termed parovarian. Yet minute detached cysts, identical with those over the parovarium, are very frequently detected far from that structure, lying under the broad ligament as it passes over the upper border of the Fallopian tube. This suggests, possibly, some common non-Wolffian origin.

4. True cysts of the broad ligament are developed, according to Coblenz, from relics of the obliterated part of the Wolffian body, occupying that portion of the broad ligament which lies between the inner part of the tube above, the ovarian ligament below, the parovarium externally, and the uterus internally. This seat of origin, and the almost constant presence of papillary growths, identical with those seen in cysts of the hilum of the ovary, favour Dr. Coblenz's theory. In any case, this variety must be distinguished from the parovarian cysts. Cysts of the broad ligament, of necessity, force apart the layers of the ligament as they grow. Their increase is rapid, for they are equally in communication with the trunks

of the ovarian and the uterine arteries. They do not always grow in the same direction; some push the anterior layer of the broad ligament forwards, others push back the posterior layer, and then increase, forming large tumours behind the uterus. Others part the layers of the ligament asunder below and grow into the cellular tissue around the vagina, pushing forwards the walls of that canal. A still rarer class push themselves laterally under the peritoneum, after escaping from the ligament, till they come into direct contact with the cæcum or sigmoid flexure, when they grow upwards; or, growing downwards, they may force their way between the rectum and uterus, pushing up the fold of Douglas. The rarest kind push forwards along the anterior wall of the vagina, the back and sides of the bladder, and the subperitoneal cellular tissue, so that ultimately they lie immediately under the abdominal wall, entirely in front of the peritoneum. Coblenz quotes clinical records of all these varieties. It is only by the continuous pressure of a cyst of this kind, with simultaneous morbid changes in the serous membrane, that the broad ligament can be forced apart below. Guérin and Lebec have shown that, normally, the lower limits of the two layers of the ligaments are united and cut off from the structures beneath them by very dense cellular tissue,* and inflammatory exudations cannot force them apart. Cysts of the broad ligament form large multilocular tumours, generally filled with clear fluid and abundant papillary growths. They are completely sessile, and often in dangerous proximity to the ureters or large intestines. Spencer Wells and other authorities have given good descriptions of the great difficulties experienced in operating for the removal of these cysts. The papillary growths, perforating the walls, often spread on to the peritoneum, or, at least, cause ascites.

5. Para-uterine cysts are extremely rare. They spring from unobliterated segments of the upper part of Gaertner's duct, and push the uterus aside, bulging outwards and upwards from it, so that a kind of pedicle may exist; but uterine tissue must be cut into, and it is generally impossible to enucleate the deepest part of the cysts. These tumours rarely contain papillary growths, for they arise from a duct rather than from the true adenomatous tissue of the Wolffian body.

6. Paravaginal cysts, developed, according to Coblenz, from the lower part of Gaertner's duct, have been described, and may be papillomatous. They resemble the variety of broad ligament cyst, which forces itself downwards; but in a paravaginal cyst the broad ligament, tube, and ovary, lie in a normal condition, and entirely above them. Dr. Coblenz does not state whether he considers the common cyst of the vagina, found close to the urethra, to be developed from the lowest part of Gaertner's duct; but, considering where that duct opens, when it is teratologically permanent, such a theory is quite admissible.

Through the adoption of a truly scientific method, Dr. Coblenz has been more successful in making a satisfactory classification of cysts of the female organs than have any of his predecessors; and it is only the origin of the true ovarian cyst that yet re-

* *Trans. Path. Soc.*, vol. xxxii.

† On the Pathology of certain so-called Unilocular Ovarian Cysts (*Trans. Obstet. Soc.*, vol. xiv).

* *Gazette Hebdomadaire de Médecine et de Chirurgie*, April 15th, 1881; *British Medical Journal*, vol. i, 1881, p. 889. It is through the medium of the lymphatics, and not by direct accumulation and pressure downwards, that inflammatory deposits extend beyond their original limits, in cases of pelvic cellulitis.

mains unsolved. A very fine series of diagrams accompanies this author's paper in the eighty-fourth volume of Virchow's great treasury of pathological science.

ALBAN DORAN.

DRAGENDORFF ON BLOOD-STAINS.

DRAGENDORFF has published a valuable memoir on the detection of blood-stains (*Untersuch. über Blut-spuren; Pharm. Jour.*, vol. xii, p. 586). Hæmoglobin possesses the power of absorbing oxygen, which is again given off in contact with reducing agents. Oxyhæmoglobine, examined spectroscopically, shows a characteristic spectrum. It is soluble in water, as well as in aqueous solutions of potassium iodide, borax, and very dilute potash or ammonia. These saline solutions dissolve the oxyhæmoglobine from old blood-stains more readily than pure water. A cold saturated solution of borax is especially to be recommended for this purpose, since the solution is not liable to decompose. Oxyhæmoglobine loses oxygen when placed in contact with reducing agents, and it then yields a characteristic spectrum of reduced hæmoglobine. If ammonium or sodium sulphide be used as the reducing agent, the spectrum of the reduced hæmoglobine may pass gradually into that of sulphohæmatine. Acetic acid and similar agents transform hæmoglobine into hæmatine, which likewise possesses a characteristic spectrum. Warming with dilute solutions of potash or soda sometimes converts it into reduced hæmatine. The guaiacum and hydrogen dioxide test, being one of the most delicate, should never be omitted. It has, however, only a limited value, since other organic substances yield a similar reaction.

Among the many reagents for the precipitation of blood-pigment, tannin and zinc acetate are especially serviceable, since the hæmoglobine or hæmatine is not decomposed, and the presence of borax, or of the salts present in spring-water in the solution, does not affect the precipitation. The so-called hæmine crystals may be obtained from the above precipitate, or from dried blood, by allowing a little of it in a drop of glacial acetic acid, with a fragment of common salt, to evaporate to dryness at the ordinary temperature, or by warming to 60 or 80 deg. Cent. (140 to 176 deg. Fahr.). The latter method is not so certain, and the test requires some practice to ensure success.

After an examination of the spots themselves, when the quantity at disposal is only small, it is advisable to remove particles of dried blood, when possible, with a knife, reserving the dried blood for further examination, and to apply the tests to the scraped spot in the following order. One spot may suffice for several reactions.

1. The guaiacum test. A small piece of filter-paper is moistened with distilled water, laid upon the spot, and frequently pressed down with a glass rod. After from five to thirty minutes, it is removed and moistened with oil of turpentine which has been exposed for some time to the action of the air, and fresh tincture of guaiacum. The blue coloration must make its appearance within a few minutes. If the coloration do not make its appearance, it will scarcely be possible to detect blood by any other test. An affirmative reaction does not, however, necessarily prove the presence of blood.

2. Another, or the same, spot is macerated with a drachm or so of a cold saturated solution of borax, either at the ordinary temperature, or at 40 deg. Cent.

(104 deg. Fahr.). The solution gradually assumes a red or reddish-brown colour, if blood be present. In this case, it must be examined with the spectroscope for oxyhæmoglobine. It has been urged against this test, that other solutions, such as certain red inks made from cochineal, a colouring matter in the feathers of the banana-eater, and purpurine-sulphuric acid, may show similar spectra. The first may be recognised by their being decolorised by chlorine water without producing a precipitate. The second does not yield the spectrum of reduced hæmoglobine. To obtain this from oxyhæmoglobine, treatment with a solution (1 to 5) of sodium sulphide is recommended. The last, purpurine-sulphuric acid, only yields a spectrum when the solution is hot.

3. If the spectroscopic test succeed, the guaiacum test may be repeated with a small quantity of the solution.

4. The solution is diluted with 5 to 6 volumes of distilled water, and a 5 per cent. solution of zinc acetate added as long as a precipitate forms. This is filtered off and washed slightly. This precipitate, dissolved whilst moist in about 20 drops of glacial acetic acid, shows the hæmatine spectrum, if sufficient blood be present.

5. A small portion of the precipitate may be dissolved on a slide in a drop of glacial acetic acid, a very small crystal of common salt added, and allowed to dry slowly by exposure to the air. The slide may then be examined microscopically for hæmine crystals.

6. If any dried blood have been scraped from the spot, a few fragments may be used for the hæmine crystals, as under 5. After recognising these, the slide may be washed with a little water, and the guaiacum test tried.

Finally, the remainder may be incinerated, and the ash tested for iron. If plenty of the material be at disposal, nitrogen may be detected by the usual methods; but, if the spots be upon iron, it must be borne in mind that iron-rust may absorb ammonia and so yield the nitrogen test. Wool, silk, hair, etc., can also be sources of error. The detection of blood upon rusty iron is difficult, from the fact that the blood-pigment forms a compound with the iron-rust which is not readily soluble. Borax solution at 50 deg. Cent. (122 Fahr.) removes hæmoglobine from this compound. The solution thus obtained may be examined as above described; or the rust may be treated with warm acetic acid, and examined spectroscopically for hæmatine.

To ascertain the source of the blood, the following methods are serviceable

7. If the blood be fresh, the size and shape of the corpuscles may be of service, since they differ, though not very greatly, in different animals; but, in partially decomposed, and in dried blood, the corpuscles are generally so much altered as to render the examination difficult, and the results unreliable. A thin fragment scraped from a blood-stain may be examined in turpentine under the microscope, or soaked in solutions which either do not at all, or only slightly, attack the corpuscles. After removing the hæmoglobine as far as possible with such solutions, the residue may be tested with an aqueous solution of iodine. The blood-fibrine which is undissolved absorbs iodine and renders itself thus evident. Proof of the presence of fibrine may be of importance, since its complete absence would indicate the use of a defibrinated blood, perhaps to simulate a crime.

8. Possibly hairs, fish-scales, etc., imbedded in

the blood, may indicate its origin. Often, too, the dried blood, warmed with a little dilute sulphuric acid, evolves an odour peculiar to the animal from which the blood was derived.

9. Blood from the stomach, etc., frequently contains epithelium-cells and sarcinæ; that from abscesses, fat, pus-corpuscles, and cholesterine. In cases of alleged defloration, epithelium-cells and spermatozoa should be searched for.

10. Bug and flea spots differ in appearance. The residue is free from fibrine and from blood-corpuscles.

The exact determination of the age of a blood-stain is not possible. The older the stain, the more difficult it is to extract the hæmoglobine. An aqueous solution (1 in 130) of arsenious acid dissolves a spot one or two days old in the course of about fifteen minutes; one eight days old, in about half an hour; after two or three weeks, in one to two hours; after four to six months, in three or four hours; and after a year, in four to eight hours.

Solution of borax is recommended for the extraction of blood from earth, etc. Such a solution may be examined spectroscopically, and 0.5 per cent. of blood may be thus detected.

Highly diluted blood, such as, for instance, soapy or spring water containing small quantities of it, may be precipitated with zinc acetate. One part of blood in 6,000 parts of water can be easily detected; but the limit in urine is 1 in 1,000, and certain constituents of the urine render the detection more difficult.

THOMAS STEVENSON, M.D.

LANGER ON THE CHEMICAL COMPOSITION OF HUMAN FAT AT DIFFERENT AGES.

DR. LUDWIG LANGER has carried out in Professor Ludwig's laboratory in Vienna a series of researches on the chemical constitution of human fat in children and adults (*Sitzungsber. der Kaiserl. Acad. der Wissensch.*, June 1881; and *Allgem. Med. Central-Zeitung*, No. 1, 1882).

The investigations of Fleming, Toldt, Löwe, and others, have proved that the chemical process of the formation of fat takes place in the fat-cells, which not only take part in its formation, but also in its decomposition.

A comparison of the adipose tissue in a newly born child and in an adult man discloses remarkable physical differences. The adipose tissue in the adult varies in colour from clear yellow to brownish, and is very soft; and, on making a section of the panniculus adiposus, little drops of oil exude. Microscopic examination shows in each fat-cell one or more clear drops of oily matter, and it is only in quite exceptional cases that acicular crystals of fat are found. On the other hand, the panniculus in the body of an infant is remarkably firmer and harder. It is greyish white in colour, and readily crumbles, like wax that has been boiled in water. On microscopic examination, numerous crystals are seen in almost every cell. Dr. Langer's present researches show that the fat of the child and of the adult present essential differences in regard to the relative proportions of the chemical constituents.

The author further points out, that there are some differences between the newly born child and the adult, with regard to the general distribution of the fatty tissue. The development of the adipose tissue commences in the second half of foetal life. In

well nourished newly born children, the renal capsules show only small quantities of fat, while on the other hand, nearly all the fat is concentrated in the subcutaneous tissue. Comparison shows that the panniculus adiposus of the child is relatively five times as thick as that of the fattest adult.

The fat obtained from the panniculus of the infant and of the obese adult presents a marked difference. At the ordinary temperature, the child's fat forms an uniform white tallow-like mass, the melting point of which is 45 Cent. (113 Fahr.); the fat of the adult separates into two layers, the upper one of which is fluid, transparent, yellow in colour, and does not solidify until a temperature below freezing point is reached, while the lower layer appears as a crumbly crystalline mass, which becomes fluid at 35 Cent. (96.8 Fahr.).

By saponification, and separation of the acids, Dr. Langer found that in the newly-born child 100 grammes of the fatty acids contained 32.75 grammes of solid acids, while in the adult the same quantity contained only 10.2 grammes. Thus the fat of the newly born child contained about three times as much solid acid (palmitic and stearic) as that of the adult. The percentages are as follows:

	Child.	Adult.
Oleic acid . . .	65.75	89.80
Palmitic acid . .	28.97	8.16
Stearic acid . . .	3.28	2.04

The fat of the newly born child thus contains more glycerides of palmitic and stearic acids, and less of oleic acid, than the fat of the adult.

According to Dr. Langer, one form of sclerema neonatorum is connected with the condition of the fat. Sclerema neonatorum is either a result of serous infiltration of the skin and subcutaneous areolar tissue, or of the solidification of the fat in the panniculus adiposus. The latter form is to be regarded as a phenomenon consecutive on various diseases, such as inflammation of the lungs, in the course of which collapse and lowering of the temperature of the body occur. As has been already said, the melting point of the infant's fat is 45 Cent. (113 Fahr.)—that is, far above the temperature of the body. 'It cannot,' Dr. Langer says, 'be assumed that the fat has a lower melting point within the body than outside it. It hence follows that even in the living child a large portion of its fat is not fluid, but only in a sufficiently soft condition. If the temperature of the body fall, whether through collapse or in consequence of withdrawal of heat from without, it can be readily understood that the fat in the panniculus adiposus will solidify, and a fatty sclerema will be produced. A fall of the temperature to 32 Cent. (89.6 Fahr.), sometimes lasting for days before death, is not unfrequently observed in some illnesses of newly born children. With such a temperature, as I have convinced myself by experiment, the fat in the panniculus adiposus is quite solidified. The occurrence of fatty sclerema is not possible in the adult, because of the different condition of the fat, and because the temperature of the body can never fall so low during life as to cause solidification of the fat in the adult.'

A. HENRY, M.D.

GUNNING ON BACTERIA IN EXPIRATION.

IN the January number of the *Klinische Monatsblätter für Augenheilkunde*, Professor Gunning has communicated a paper on the existence of bacteria in the air of expiration. This question was raised

by Professor Becker at the International Medical Congress held in Amsterdam, 1879, and it was there maintained that the cause of certain unsuccessful operations on the eye was to be sought in the presence of bacteria in the breath of the operator and bystanders, and that the foul-smelling breath of certain individuals was to be taken as proof of bacterial activity.

After some remarks on the labours of other observers, who have shown that bacteria exist freely on the mucous surfaces of the oral and nasal cavities, the author alludes to the notion prevalent in medical circles that spores from these cavities are widely distributed by the air of expiration, and which he declares is refuted by Nägeli's theory that solid matters cannot pass into the air by evaporation from fluids or damp substances, and therefore also bacteria do not find their way into the air of expiration. He next proceeds to recount Lister's observations on wounds of the pleura from fracture of the ribs, and then refers to Tyndall's experiments in 'Dust and Disease'. But, as Professor Gunning was not satisfied that, though air might be 'optically pure', it might not contain a large quantity of floating dust particles (*e.g.*, the *Spaltpilze* of Nägeli), he determined to institute a series of experiments to solve the question. To this end he began by infecting sterilised infusions of meat with a drop of saliva taken (*a*) from the general secretion of the mouth; (*b*) from secretion obtained by irritating the hard palate. The tubes were kept at a temperature of 30 deg. to 35 deg. Cent. (86 to 95 Fahr.), and in forty-eight hours all of (*a*) and just half of (*b*) were found to be cloudy. The rest of the (*b*) tubes remained perfectly clear to the end of the experiments, made in the hottest period of the year. Hence Professor Gunning concludes that there is a distinct difference of putrefactive energy in the saliva collected from the whole of the oral secretion, and that which is taken from a part, and is of opinion that, in saliva freshly secreted and obtained with proper precautions, few micro-organisms, or even none, exist.

Having thus shown that the air of respiration has plenty of opportunity to take up bacteria, he then commences other experiments to prove that it does not. A flask (*A*), the neck of which divides into two arms (*C* and *D*), and one of these (*D*) bifurcates again into *E* and *F*, is charged with meat-infusion and sterilised by boiling. During ebullition, *C*, *E*, *F*, are closed with plugs of cotton-wool. In order to ascertain if perfect sterilisation have been effected, the flasks are left for some days. The experiment begins by the insertion of the end *F* in the mouth, and the removal of the cotton-wool plug with the tongue. Air of expiration is then driven through the apparatus from twenty to thirty minutes, and the experiment ends by pushing the plug at *E* as far as *D*. In infusions experimented on in the above manner, no trace of putrefaction was ever detected; and Professor Gunning states that he has still two flasks, prepared with these precautions, which are perfectly clear after the lapse of two years.

In a further series of experiments, the expired air was driven directly through the infusion. A U-shaped tube took the place of the half-filled bulb, but in other respects the apparatus was similar, and the results exactly the same.

From the above experiments, Professor Gunning concludes that inspired air is freed from bacteria which may have been contained therein; and that the expired air does not carry bacteria along with it out of the body.

R. G. HEBB, M.D.

TILLMANN'S ON FISTULOUS COMMUNICATIONS BETWEEN THE GASTRO-INTESTINAL CANAL AND THE CHEST.

DR. H. TILLMANN'S reports, in von Langenbeck's *Archiv*, Band xxvii, Heft 1, a case observed by himself and Dr. Neubert of Leipsic, of fistulous communication between the intestinal canal and the right pleural cavity. The patient was a lad aged 15, who, on the morning of June 9th, 1880, was seized just below his arms by a friend and swung forwards and backwards in sport. After his dinner he vomited twice, and during the following night was taken with acute pain in the right hypochondrium. This pain persisted and increased in severity, and the patient was compelled to lay up. On the ninth day, and after the tenderness in the region of the liver had been slightly relieved, signs of effusion on the right side of the chest were presented. On the fourteenth day, he was suddenly attacked with intense pain over the whole of the right side of the chest, and with increased tenderness in the abdomen. Dulness on percussion was made out over the whole of the right lung, except in the second, third, and fourth intercostal spaces near the sternum, where there was a well-marked tympanic sound. At the same time the patient suffered much from dyspnoea, and presented symptoms of collapse. He was also very feverish. The space between the fifth and sixth ribs on the right side having been punctured, about a pint of thin greenish purulent fluid, with a decided faecal odour, was withdrawn by aspiration. This exudation was mixed with fluid intestinal contents and with bile. On the sixteenth day, a free opening was made in the wall of the chest, and the purulent cavity was washed out with a solution of salicylic acid and drained. The external opening was covered by antiseptic dressings; and, during a period of four days after the second operation, the right side of the chest was washed out twice daily by a solution of permanganate of potash. Subsequently, and when the strength of the patient had improved, carbolic acid was substituted for the permanganate in the injections. The discharge, which, until the middle of August, occasionally had a faecal odour, and presented minute fragments of food, diminished steadily, save with one relapse after premature removal of the drainage-tube on August 14th, and, at the end of the fifth month, had altogether ceased. After an interval of six months from the date of the injury, the patient was quite well.

In his comments on this case, Dr. Tillmanns states that, from what he has been able to make out from a study of the literature of pathological communications between the abdominal and thoracic cavities, the formation of a fistula leading into the chest from any part of the intestinal canal is a very rare occurrence. Communications are much more frequently established between the upper portions of the digestive tract—the œsophagus and stomach, and the thoracic cavity. The best known example of such is a cancerous perforation of the œsophagus involving the pleura. Gastro-thoracic fistula is occasionally formed in cases of ulcer of the stomach, and of diaphragmatic hernia. Of much more frequent occurrence are cases of perforation of the diaphragm, by purulent collections formed in the liver or some other solid abdominal viscus.

The symptoms observed in this case soon after the receipt of injury and the occasional presence in the discharge of half-digested food indicated, in the opinion of Dr. Tillmanns, a rupture of the duodenum

near its junction with the jejunum and the attachment of the band of smooth muscular fibres known as Treitz's muscle. It is thought that this patient might probably have had ulceration of the duodenum, an affection which often runs a latent course until a sudden termination in fatal perforation. In consequence of this supposed perforation of the duodenum, suppuration, it is thought, had been established, the faecal abscess having been either shut off from the abdominal cavity by inflammatory adhesions, or having, from its origin, been extraperitoneal. The pus might have passed along the yielding connective tissue or along the posterior abdominal wall, and finally have penetrated through the diaphragm, and set up faecal pyo-pneumo-thorax in the right pleural cavity. Though regarding this as the most probable explanation of his case, Dr. Tillmanns would not altogether reject the theory of its origin in gangrenous diaphragmatic hernia, and in perforation of a small loop of intestine tightly constricted by the margins of a small orifice in the muscle. It is pointed out, however, that this view is opposed by the facts of the spontaneous closing of the fistula soon after thoracotomy, and of the complete recovery of the patient. In considering the probable course of the faecal abscess from the abdominal to the thoracic cavity, Dr. Tillmanns insists on the clinical importance of the interspaces free from muscular structure, which have been described by Henle as existing between the costal and vertebral origins of the diaphragm. These interspaces, occupied merely by opposed layers of peritoneum and pleura, are of importance with regard to the conditions of diaphragmatic hernia, of subphrenic, hepatic, and renal abscesses invading the chest, and of large hydatid and other tumours in the upper part of the abdomen.

Dr. Tillmanns has collected twenty-two cases of fistulous communication between the chest and the intestinal canal. In fourteen of these cases, the fistula led from some part of the large intestine (vermiform appendix, ascending colon, hepatic flexure of colon, transverse colon), and in the remaining eight cases from the small intestine. In three cases, fistulae leading from the duodenum had opened through the posterior wall of the chest, without having perforated the pleura. The most frequent cause of the fistulous communication, according to these collected cases, is perforating ulcer of intestine (fourteen out of the twenty-two cases). In five cases, the fistula was the result either of traumatic suppuration, or of gangrenous diaphragmatic hernia caused through injury. In one case, the communication between the chest and intestinal canal originated in a pulmonary abscess caused by the presence in a lung of a foreign body. In the cases in which the fistula resulted from perforating ulcer of the intestine, the vermiform appendix was the original seat of the disease in six instances, the hepatic flexure of the colon in two, and the duodenum in five. In three cases the fistula communicated with one lung, and in three other cases it passed between the pleura and the thoracic wall. In every case of perforating intestinal ulcer, the fistula was on the right side of the chest; of the eight cases of faecal fistula that had originated in gastric ulcer, in injury, in action of foreign bodies, or diaphragmatic hernia, in five the fistula was on the left, and in three on the right side.

In some remarks on the treatment of thoracic faecal fistulae, Dr. Tillmanns states that it is proved by his case that this condition may be cured by thoracotomy and drainage of the cavity in the chest, and that spontaneous closing of the intestinal

perforation may follow evacuation of an intrapleural and probably also of a subphrenic faecal abscess. It is suggested, that resection of the perforated portion of intestine might be justifiably resorted to in cases of faecal abscess with persistent intestinal communication. It is well known that good results have been attained from antiseptic resection of the affected portion of intestine, in cases of false anus and of gangrenous hernia. Equally valid indications for such treatment might be presented in certain cases of thoracic faecal fistula, and of subphrenic faecal abscess. In many cases, also, of perforation of the oesophagus and stomach, cure might possibly be brought about in a similar manner, with or without stitching together of the divided organ, if it were possible to drain effectually the abscess caused by such perforation. Again, in recent cases of perforation at some portion of the gastro-intestinal canal, success might attend very early laparotomy and stitching of the perforated gut or stomach. The result of this treatment in such a condition would depend mainly on the points whether and, if so, to what extent, the contents of the digestive canal had been poured out into the peritoneal sac, and whether the consequent peritonitis were diffused or circumscribed.

W. JOHNSON SMITH.

OLLIER ON JUXTA-EPIPHYSAL SPRAIN.

In a contribution to the *Revue de Chirurgie*, No. 10, 1881, on juxta-epiphysal sprain, and its direct and remote results with regard to inflammation of osseous structure, M. Ollier describes the lesions that may be produced in a long bone, near one of its extremities, by violent movements of the contiguous articulation, or by violence applied to the bone itself. In the adult, the usual results of violent movement of an articulation are stretching and laceration of its ligaments, with or without separation of the osseous processes to which some of the ligaments are attached. In young children, on the other hand, particularly those under the age of three years, the ligaments and cartilages offer resistance; and it is beyond the articulation, and at the weakest and most yielding part of the long bone, that the lesion is produced. This lesion consists, in some instances, in epiphysal separation in its first degree; in other instances, in incomplete fracture near the epiphysal line. The following lesions are mentioned as the probable results of the so-called epiphysal sprain: crushing, compression, and fracture of the spongy bone-tissue; indentation and partial fracture of the thin peripheral layer of compact tissue; and, as consequences of these lesions, squeezing out of the medulla, and effusion of blood into the medullary spaces and under the periosteum. These injuries are more likely to result from violence to the contiguous articulation, when the consistence of the bone has been impaired through rickets or any other condition of acute or chronic disease, that has a tendency to interfere with the nutrition of the osseous structure. As these lesions usually affect the interior parts of the bone, and do not involve the periosteum, which membrane remains intact, they are liable to be overlooked by even the most experienced surgeons. The absence of displacement and of readily appreciable anatomical lesions, will account for the slight importance that has hitherto been attached to the disturbances caused by sprain of a joint in a young patient. According to Professor Ollier, the so-called growing

pains, which affect some infants at the period when the growth of the skeleton is most active, are often the result of falls and of excessive movements, and may be explained by the feeble consistence of the recently formed juxta-epiphysal portions of long bones. The attention of M. Ollier was first directed to this point, about eighteen years ago, by a singular case of arrest of growth in the humerus, without suppuration or violent inflammation, which had followed a fall on the arm.

Juxta-epiphysal sprain may give rise to a more or less painful swelling, restricted to the part of the long bone near the epiphysal line, whilst the neighbouring articulation remains quite free. There is, in most cases, slight tenderness, which ceases spontaneously in the course of a few days. Tissue-repair, in young children, is extremely rapid; the periosteum swells at once, and, when thus swollen and thickened, restricts the abnormal mobility in the juxta-epiphysal region, which, in the more severe forms of sprain, is the immediate result of compression and crushing of the spongy bone-tissue, of laceration of the peripheral layer of the compact tissue, and of loosening of the subchondroid spongy layer. Even in the most severe forms of juxta-epiphysal sprain, the periosteum soon attains sufficient thickness and resisting power, to enable it to form a kind of splint, and to render diaphysis and epiphysis quite immovable. Speedy recovery usually takes place in children that are healthy and well-nourished; but in those that are not well cared for, and are scrofulous, and have a hereditary predisposition to tubercle, and especially in those with swollen and caseating lymph-glands, the prognosis is less favourable. In this latter class of patients, the trabecular fracture, or the effusion of blood into the cancellated tissue, is very likely to become the origin of chronic and painless osteo-myelitis, a condition usually regarded as an immediate or direct result, or rather as a spontaneous product of scrofula. As a cutaneous affection may give rise to swelling of the neighbouring lymph-glands, and as irritation of a mucous membrane may be the origin of deep-seated adenitis and of splanchnic tuberculosis, so, in a case of trabecular fracture, the crushed medulla may become the starting-point of a neoplasm, lymph-cells may accumulate in the medullary spaces, pass into a condition of fatty degeneration, and form caseous foci, which, progressively infecting the bone, will lead, in a predisposed subject, to any of the varying forms and consequences of osseous tuberculosis. In order to prevent any dangerous results from juxta-epiphysal sprain, the surgeon has only to keep the injured limb at complete rest for a certain time, and, if there be much swelling and effusion of blood, to apply compression at the seat of injury. The necessity is pointed out of carefully examining any infant, any of whose limbs has been the seat of violent movement, or has been injured in a fall. If, on examination, a juxta-epiphysal swelling, whether painful or indolent, be made out, then the little patient should be kept at rest, and watched until the bone has returned to its normal size.

In conclusion, Professor Ollier writes of the relations of juxta-epiphysal sprain with the lesion observed frequently in the forearm of infants, and known by the name of painful pronation, and with regard to which many theories have been put forth. Many surgeons have sought in the articulations for the cause of this injury, some regarding it as a lesion of the wrist, others as a lesion of the elbow. Goyrand, who attributed it at one time

to forward luxation of the upper extremity of the radius, subsequently regarded it as due to luxation of the triangular cartilage of the radio-carpal joint. Professor Ollier, from both clinical observation and experimental research, has been led to regard this lesion of painful pronation as a juxta-epiphysal sprain of the lower end of the radius or ulna, accompanied by more or less stretching of ligaments, muscles, and other external structures, but consisting essentially, in children below three years of age, in the lesions already mentioned, such as torsion of bone-structure, inflexion or indentation of peripheral compact tissue, trabecular ruptures in the spongy tissue, and detachment of periosteum.

W. JOHNSON SMITH.

WIGHT ON FRACTURE OF THE NECK OF THE FEMUR.*

WHEN we have admitted the uncertainty and the not unfrequent impossibility of making a diagnosis of fracture of the femoral neck, we may ask the following question: 'Are there any signs by which we can be reasonably sure that there is a fracture of the neck of the femur, on the supposition that crepitus is absent, and that it is not good practice to try to find crepitus?'

In order to bring some points to bear on the settlement of this question, I have tabulated the records of twenty-one cases of fracture of the femoral neck that I have seen, some with other surgeons and some in my own practice. The records that I have tabulated contain the following measurements: 1. Inside measurements from the superior anterior spines of the ilia to the lower ends of the internal malleoli; 2. Outside measurements from the superior anterior spines of the ilia to the lower ends of the external malleoli; 3. Measurements from the tops of the great trochanters to the lower ends of the external malleoli; 4. Measurements from the bases of the tibiae to the lower ends of the internal malleoli; 5. Measurements from the superior anterior spines of the ilia to a line drawn transversely in front between the tops of the great trochanters. This is the transverse femoral line.

The object of all these comparative measurements is to determine the possibility of original symmetry of the two limbs, and to find out, as far as possible, if the injury to the hip have caused any shortening of the limb on the injured side, so that we can infer the probability of there being a fracture of the femoral neck. Let me repeat, in this connection, some of the points constituting reliable surgical measurements. 1. The instrument of measurement should be an accurate steel tape-line, with feet and inches on one side, and mètres and centimètres on the other side. This tape-line will not elongate under tension, and the ordinary tape-line will elongate under tension. 2. The measurements should be made independently; that is, when one is made, the points of the tape-line should be removed from the surgeon's hands, and new points for the other side of the body should be determined without any reference to the measurement of the first side. 3. In all ordinary cases, the leg may be measured quite accurately by semi-flexing it on the thigh, for this position brings the anterior edge of the base of the tibia markedly under the integument, so that it can be made quite as accurate a point of measurement

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as the superior anterior spine of the ilium. 4. In most cases, the tops of the great trochanters can be so accurately compared, as to make the measurement from them to the external malleoli of considerable value. 5. In all cases, the personal equation of the surgeon should be most carefully excluded from any measurement. 6. The lower limbs should be put parallel with the pelvis; for, in the ordinary measurements, adduction elongates and abduction shortens the lower limb.

1. In all the twenty-one cases above recorded, there was more or less obliteration of the abdomino-femoral—or inguinal—fold on the side of the injury. This was probably due to two causes; *a*. Effusion in front of the injured femoral neck; *b*. Contraction of the soft parts in front of the femoral neck. 2. About one-half of the patients were examined standing up; and when the foot of the injured side was brought down to the floor, the gluteo-femoral fold on that side was seen to be lower than the gluteo-femoral fold on the uninjured side. 3. There was out-rotation of the injured limb in all of the above cases. In Cases I and II the out-rotation was not marked. 4. In all the cases of impaction of the base of the femoral neck, the upper end of the femoral shaft was materially enlarged. There were probably eight such cases. 5. In all of the cases of impaction of the top of the femoral neck into the femoral head, the upper end of the femoral shaft was not enlarged. There were probably five such cases. 6. The other eight cases could not probably belong to either of the above classes. 7. In all of the above cases, there was more or less prominence of the outside of the hip, but the gluteal region was somewhat flattened; and generally there was a fusiform enlargement of the upper part of the thigh. 8. In fourteen of the twenty-one cases there was more or less asymmetry of the lower limbs; and this point is important for two reasons. First, it was determined by measuring from the tops of the great trochanters. Second, it agrees with the general fact, that about two persons out of every three have asymmetry of lower limbs. Hence, the above measurements from the tops of the great trochanters to the external malleoli were probably correct. Hence, such a measurement may be recommended as a valuable aid in making a diagnosis of fracture of the neck of the femur.

1. The average shortening after fracture of the neck of the femur, as shown by the inside measurement, is about .62 of an inch; as shown by the outside measurement, is about .55 of an inch; and as shown by both measurements, is about one-half an inch, .58. 2. The greatest shortening was one inch and one-half—in Case V. 3. The least shortening was zero—in Case XVI; but in that case there was an actual shortening of three-fourths of an inch. 4. The average normal asymmetry of the lower limbs in the above twenty-one cases was .4 of an inch. 5. The average shortening of the measurement from the superior anterior spine of the ilium to the transverse-femoral line was about one-half inch, again showing that the top of the trochanter major is an approximately accurate point from which to measure. 6. In the four following cases the injured limb appeared to be shortened one-fourth of an inch by a comparison of the inside measurements.

In no case of fracture of the femoral neck do I use force to find crepitus. I consider the other evidences of fracture, such as I have above enumerated, as sufficient to come to a practical conclusion. Nor

do I give an anæsthetic in order to make an examination. In this connection, I would make the following statements. 1. Moving the outer fragment when it is in contact with the inner fragment, will generally carry the inner fragment with it, and there will be no crepitus; and when there is impaction, ordinary manipulation will not cause crepitus to be felt. Yet crepitus may at times be felt, when there is impaction of the neck of the femur. 2. Moving the outer fragment when it is not in contact with the inner fragment, of course will not give crepitus. 3. Hence, unwarrantable force will be required in order to get crepitus in many cases of fracture of the neck of the femur. And more than this, an impacted fracture of the neck of the femur may be broken up by severe manipulation, and a patient who would have had a useful limb may be quite completely disabled for life; for an impacted fracture of the neck of the femur is the best setting of the bony fragments that the surgeon can have. 4. In a suspected case of fracture of the neck of the femur, I examine all the witnesses of fracture except crepitus; and if these witnesses agree substantially, I pronounce a verdict in favour of fracture of the neck of the femur. And if there be a doubt as to the correctness of such a verdict, I give the patient the benefit of that doubt, by treating the case as if there were fracture of the neck of the femur; and then the surgeon receives a benefit from that doubt. But if there be no fracture, the patient has had some days of needful rest, and has had a contused hip well treated.

GLUCK ON EXTIRPATION OF THE LUNG.

DR. TH. GLUCK publishes, in the *Berl. Klin. Woch.*, 1881, No. 44, a communication entitled an Experimental Contribution regarding the Question of Extirpation of the Lung. The *Cincinnati Lancet and Clinic* makes the following extract.

The author, basing his views upon successful experiments with animals in surgical affections of the lungs, recommends operative interference in man under the following considerations: 1, the use of anæsthetics; 2, the immediate effect of the operation (*a*) paralysis of the heart (shock), and (*b*) the occurrence of œdema of the lungs; 3, the consecutive dangers during the healing of the wound, (*a*) thrombosis, slipping of the ligature and secondary hæmorrhage, (*b*) pericarditis and pleuritis of the opposite side; 4, finally, the condition of the thorax upon the operated side, and its orthopædic treatment.

He first studies the question of œdema of the lungs, calling attention to the fact that the experiments of Cohnheim and Welch have proven that it may be produced by ligation of the great arterial trunks when it occurs as a result of stagnation of circulation (*Stauungs-œdem*), but showing also that any serious stagnation only occurs in the lungs under enormous obstacles in the course of the greater circulation. It is only when the aortic arch is blocked between the trunk of the innominate and the left subclavian, and two branches of the innominate artery are closed, that is, when the only escape tube from the aorta (except the coronary arteries) is formed by one carotid or the right subclavian, that *Stauungs-œdem* of the lung regularly occurs. Experiments in the way of blocking the flow from the pulmonary veins into the left ventricle have shown that, while it may produce œdema of the lungs, nevertheless, the block must be very great; that, in

fact, nearly every venous branch must be blocked before œdema occurs, and that it is only under this immense resistance that the pulmonary artery suffers any degree of pressure. Pulmonary œdema occurs, according to the author, when, after paralysis of the left ventricle, the right ventricle continues to act, and this left-sided paralysis constitutes, therefore, the efficient cause of œdema pulmonum.

Before the author undertook to cut out a lung, he tied the root of the lung in a whole series of animals. Under these circumstances, he never saw œdema of the intact lung as caused either by collateral hyperæmia, or by processes of inflammation. In no case did there form a parietal thrombosis of the heart, an absolutely necessary condition for the continuance of the circulation. Under antiseptic surroundings and least possible injury, the wound healed by first intention. Sudden death occurred twice, by arrest of the action of the heart. These were cases in which the ligature was applied too near the heart, so that a part of the heart itself and phrenic nerve were caught in it. No other animal succumbed to the immediate effect of the operation. In several rabbits which died six to eight weeks after the operation, the ligatured lung was found as a cheesy mass in the thorax. Necropsy revealed the interesting fact that in these cases the tied vessels had closed by first intention. One of the largest rabbits still runs about in the best of health, and a year has lapsed since the ligature of the root of the right lung.

After these observations, Gluck determined to extirpate the lung; and he undertook it after free section of the ribs in order to lay bare the root of the lung, so that deep sutures might be applied and the capacity of the thorax be reduced as much as possible. His experiments showed that œdema of the lungs and thrombosis of the heart were not to be feared, even with the weakest animals. Slipping of the ligature was also a groundless fear. Of course antiseptic precautions, least possible tearing and crushing of the parts, as well as careful arrest of the hæmorrhage, were necessary pre-requisites to success. The experiment was made on twenty animals, six dogs and fourteen rabbits. The animals withstood the attack very well, and in no case was there subsequent hæmorrhage. Between the seventh and tenth days, a few of the rabbits died of pericarditis and pleuritis, with abundant fibrinous exudation. On the other hand, the author possesses still a couple of rabbits, in one of which the wound of operation after extirpation of the left lung healed without reaction in ten days. There was never dyspnoea or other symptom of disease. The animals are now, after the lapse of three months, perfectly healthy. The author emphasises the fact that the after-treatment and nourishment, in such delicate animals, deserve the greatest consideration. They alone guarantee almost absolute assurance of success in the healing of the wound.

The operator describes the procedure in detail. Under anæsthesia with chloroform in dogs (rabbits were not anæsthetised) the side of the thorax is shaven and disinfected. A curved incision with the convexity towards the sternum (from the third to the sixth rib) penetrates the skin and the muscles of the chest. These soft parts are now held apart with sharp hooks. The broad points of origin of the great anterior serratus are now detached, and the third, fourth, and fifth ribs are resected under the periosteum outside of the track of the internal mammary artery, which, arising from the subclavian

artery 7 to 14 millimètres distant from the border of the sternum, runs immediately behind the cartilages of the ribs. In rabbits, the incision need be but 4 to 6 centimètres long; in dogs, 6 to 10 centimètres. The intercostal muscles are likewise cut away. The slightest hæmorrhage is carefully checked. The pleura is now exposed intact, and, under it, may be seen the respiratory movements of the lungs and diaphragm. The pleura is now incised between two pairs of forceps, along the whole length of the wound, parallel with the sternum. At this moment the lungs collapse, and respiration becomes more frequent. Now, either the root of the lung is tied *en masse* (bronchus, pulmonary artery and vein, lymph-vessels, bronchial nerves and vessels), or one lobe of the lung after another is successively extirpated. The pulmonary stump left does not usually undergo aseptic necrosis and mummification, but continues to live like the ovarian pedicle, and takes active part in the processes of cicatrization.

After extirpation of the lung, are exposed to view the whole contents of the mediastinum, the posterior pleural space, the trachea, the œsophagus, the two pneumogastrics, the azygos and hemiazygos veins, the thoracic duct, all surrounded by loose connective tissue; likewise, the heart and the great vessels which run to it and from it; lastly, the space called usually the anterior mediastinum.

Now follows punctilious toilette of the excavated chest. Here there occurred at times a singular phenomenon. The animals were seized with sharp dyspnoea and cyanosis of the visible mucous membranes. But the breathing became normal at once, so soon as the cavity of the thorax was carefully closed and reduced as much as possible.

Gluck performed the operation in exactly the same way on three human cadavera. Of course, in operations on man, provision must be made for drainage at the deepest parts.

The author alleges that extirpation of the lung in rabbits is indisputably followed by permanent cure.

The following conditions would justify the operation in man; abscess of the lungs, gangrene of the lungs, bronchiectatic and phthisical cavities, tumours and injuries of the lungs. What effect this operation is to have in the treatment of phthisis pulmonum, is not yet to be determined. Medical literature shows numerous cases in which puncture and incision of superficial cavities have been performed. Moreover, a French surgeon once put a ligature about a small hernia of the lung and successfully removed it. Gangrene and abscess have been likewise treated expectantly. Ichorous pleurisy is treated by resection of the ribs, disinfection, and drainage, without regard to radical cure.

The author concludes with the following theses.

1. Ligature, as well as extirpation of a lung, is extraordinarily well endured by rabbits.
2. Careful after-treatment under asepsis secures a permanent healing of the wound.
3. The vessels heal by first intention under this treatment; there develops no parietal thrombosis of the heart.
4. The pulmonary pedicle does not suffer necrosis, but takes active part in the solidification of the cicatrization.
5. Secondary hæmorrhage from slipping of the ligature has never been observed.
6. In fatal cases, death was caused by pericarditis and pleuritis of the intact side; but even in these cases there was no parietal thrombosis of the heart.

BULL ON THE OPERATIVE TREATMENT OF DISEASES OF THE LUNGS.

DR. EDWARD BULL of Christiania has published in the *Nordiskt Medicin. Arkiv*, Band xiii, Häft 3, an interesting contribution to the literature of surgical interference in certain diseases of the lung. He is convinced that in this matter medicine will gain much from surgery, when sufficient material has been collected to allow rules to be laid down as to the conditions in which the operation should be performed. He relates two cases which came under his care in the hospital at Christiania.

The first case was one of gangrene of the lung in a female servant aged 23. In November 1880, she had putrid bronchitis; and, in the middle of December, infiltration limited to the anterior part of the upper lobe of the left lung. She was admitted on December 30th. On January 2nd, 1881, there was tenderness without redness or swelling, limited to a circumscribed spot in the fourth intercostal space, outside the nipple. On the 4th, effusion in the lower and posterior part of the left pleura commenced, and steadily increased. An exploratory puncture made on the 8th in the fifth intercostal space yielded serum, containing a considerable quantity of blood and numerous round cells. On January 19th, the pleural effusion had greatly diminished. Anteriorly, the percussion-sound was dull from the lower edge of the second left rib to the fifth, between the sternum and the axilla. Strong percussion over the tender spot yielded a cracked-pot sound, accompanied by gurgling. The sputa were gangrenous. An exploratory puncture over the tender spot gave exit to a sanguineo-purulent offensive fluid; while a puncture below the left angle of the scapula yielded clear yellow serum—the product of the pleural effusion.

The case was thus one of circumscribed gangrene of the upper lobe of the left lung, lying very near the thoracic wall, with coincident pleuritic effusion; the two being completely separated by pleural adhesions. On January 20th, there was infiltration around the point in front where the puncture had been made; and the skin of the left side of the chest as far as the neck was cedematous. On the 24th, an incision 3 centimètres (1.2 inches) long was made, and behind the nipple was found a cavity containing two or three tablespoonfuls of fœtid pus. The base of this cavity was formed by the fourth and in part by the third and fifth intercostal spaces; and, at the bottom of the cavity, the beat of the heart could be observed. An incision 1 centimètre long was made with a blunt forceps in the fourth intercostal space, just outside the apex of the heart; and through this opening broken up spongy tissue could be felt with the finger. The part was carefully washed out with carbolised water, and a drainage-tube was inserted. In the evening, there was some hæmoptysis. After this, the patient's condition improved rapidly for some days; the sputa were diminished in quantity, and inodorous; the discharge from the wound was slight. Then followed again some hæmoptysis, with considerable pyrexia, and infiltration in the posterior part of the left lung, and the sputa again became fœtid. In the middle of February, she was convalescent; and, after remaining at rest in the country through the summer, returned to her duty in good health in the autumn.

In contrast to this case, Dr. Bull relates the following. A woman, aged 54, of feeble constitution,

had, on April 2nd, 1881, pleuro-pneumonia of the lower lobe of the right lung; and, on the 6th, there was infiltration of the upper lobe of the left lung. On the 13th, the sputa began to be fœtid. Doubtful physical signs of a cavity in the anterior part of the upper lobe of the left lung were developed. In the night of May 10th, the patient awoke suddenly with a feeling of suffocation, and, after expectorating a large quantity of fœtid pus, rapidly died. At the necropsy, the left lung was found to be adherent to the pleura through its whole extent. Immediately beneath the pleura, separated from it only by a thin layer of lung-tissue, was found a cavity between the first and third intercostal spaces, containing fœtid sanguinolent pus. An abundant quantity of the same substance was also found in the pharynx, larynx, trachea, and large bronchi. Dr. Bull remarks that an operation would have been easily performed in this case, and would at least have prolonged life for some time. The layers of the pleura were adherent, and the abscess was comparatively superficial. The question of operating was discussed; but there appeared to be no immediate danger, and the diagnosis was somewhat obscure; the abscess-cavity, which was nearly full, giving no distinct signs. An exploratory puncture would have aided the diagnosis, and would have been made if the patient had not unexpectedly died.

The literature of the subject, Dr. Bull remarks, is as yet very scanty. Even in such recent works as Ziemssen's *Handbuch der Speciellen Pathol. und Ther.*, Gerhardt's *Handbuch der Kinderkrankheiten*, and Leyden on Pulmonary Gangrene and Pulmonary Abscess in Volkmann's *Sammlung Klinischer Vorträge*, there is no mention of the possibility of operative treatment of diseases of the lung. A Polish author, L. Radek, has described the case of a man, aged 44, who was brought into hospital suffering severely from dyspnoea. Two large communicating abscesses were found in the neighbourhood of the right nipple. When pressure was made on them, the dyspnoea was increased and pus was expectorated. The case was, however, believed to be one of empyema communicating with a bronchus. An incision was made, and a large quantity of pus escaped; the cavity was washed out with carbolic acid. Relief followed for twelve hours; but, after this, acute pleuritis of the left side set in, and the patient soon died. The necropsy showed that there was no empyema, but a large abscess of the lung.

Dr. Bull refers also to the papers on operative treatment of diseases of the lung published in English medical journals by Dr. Theodore Williams, Dr. Cayley, Mr. Johnson C. Smith, Dr. Douglas Powell, and Mr. Lyell. [Connected with these is also the case of Dr. Fenger. See LONDON MEDICAL RECORD, August 15th, 1881.]

The author makes the following comments on the artificial puncture of a pulmonary fistula. The pathological changes in the lung which may indicate such an operation, are cavities of all kinds; such as limited gangrenous foci, pulmonary abscesses, phthisical and bronchiectatic caverns. The first two may be completely healed if the loss of substance be not too great and if the remaining parts of the lung be sound or capable of healing; with large cavities, a permanent fistula perhaps cannot be always avoided. Life may be preserved for a long time in cases of considerable gangrene and of large pulmonary abscesses in many cases, where a pus-secreting permanent cavity is periodically emptied by coughing.

It must, however, be distinctly better for these patients that the cavity should have an opening of discharge through the chest-wall, and that the air-passage should remain free; the constantly threatening decomposition of the contents of the cavity can thus be best obviated. Both gangrene and abscess of the lung may indeed heal without operation; but Dr. Bull is of opinion that an operation should be performed whenever possible. Delay only reduces the patient's strength, and favours the extension of the local disease. Even if death should at last follow the operation, it would still be a palliative measure.

Phthisical and bronchiectatic cavities are probably less often amenable to surgical treatment, and the indications for operation are much more difficult. As in such cases there are usually several cavities, and, in addition, a progressive constitutional disturbance, one or two openings in the chest-wall can scarcely be of much advantage; it is only in single large cavities with stagnating contents, the evacuation of which by coughing distresses the patient, that an operation can be of use. In cases of phthisical cavity, a permanent fistulous opening must be expected; in bronchiectasis, the operation may be followed by obliteration of the cavity and radical cure.

In order that pulmonary cavities may be capable of being operated on, they must, Dr. Bull says, be superficial; the situation of deeply seated cavities cannot be determined with sufficient accuracy, and they cannot be reached without danger. Adhesion of the pleura over the cavity is evidently of the greatest importance; but it may be difficult to ascertain whether such adhesion exists. [Fenger and Hollister recommend the introduction of a needle as a means of diagnosis; if there be adhesions, it is unaffected by respiration; if no adhesion exist, it is moved synchronously with the breathing.] If the disease be not running a very rapid course, adhesion may be waited for. When the course of the disease is rapid, especially in gangrene, the surgeon must expect to find the pleural cavity open. Dr. Bull does not find in this an absolute contra-indication to operation when danger to life is imminent. He advises that in such cases an opening should be made in the chest-wall over the cavity; if adhesions be altogether wanting, pneumothorax follows; and if then the gangrenous cavity burst into the pleural sac, a counter-opening must be made, and the case treated as one of empyema. If there be pleural adhesions, but not over the cavity, a cannula may perhaps be introduced into the diseased portion of lung and allowed to remain there; if this fail, the case must be managed on the principles of operation for empyema.

When the pleura is adherent, the operation is simple. An exploratory puncture is usually free from danger; in cases where a cavity is distended with fluid, puncture is absolutely necessary; in empty cavities, the aspiration-syringe will draw off gases, perhaps having a foetid odour. When adhesion is absent, or where its presence is uncertain, and there is no danger in delay, an attempt may be made to produce adhesions by perforating the chest-wall with caustics.

Rigorous antiseptic proceedings during operation appear to Dr. Bull unnecessary, inasmuch as it is not possible to prevent the air of the room from entering through the air-passages. Irrigation of the cavity must be done very carefully, so as not to produce either irritation or hæmorrhage. Caution is

also necessary in the use of drainage-tubes, especially in gangrene of the lung, where frequently there is no special cavity, but only a mass of more or less broken up lung-tissue. In chronic phthisical caverns and abscesses, on the other hand, there is generally a cavity into which the drainage-tube may be inserted. Resection of a rib may be sometimes necessary in order to render falling in of the chest-wall possible; just as in empyema.

Dr. Bull believes that the time is not distant, when the formation of an artificial fistulous opening will be regarded as a legitimate, though rarely indicated, operation in diseases of the lung.

A. HENRY, M.D.

HERING ON EXPLANATION OF COLOUR- BLINDNESS ON THE THEORY OF, ANTAGONISTIC COLOURS.*

HERING considers every sensation of light and of colour to be produced by a combination of the six elementary sensations, black, white, blue, yellow, green, and red; white and black represent the series of colourless perceptions.

The tone of any colour which does not correspond with one of the four elementary colours, red, green, yellow, and blue, is the result of the relative distinctness in it of two of these elementary colours. Neither red and green, nor yellow and blue, can ever be distinct at the same time. He calls two such colours as are never distinct in the same visual perception, antagonistic colours.

Saturation is the degree of purity and distinctness with which the colour proper stands out from the rest of the perception. *Shading* means the more or less distinct mixture of the colour with the colourless sensations (white and black).

In the visual substance (*Sehsubstanz*) there occur six quantitatively distinct processes of unknown nature, corresponding to the six simple or elementary sensations. Every visual sensation is a mixture of the six elementary sensations, but only some of these are distinct in it; more than four are never perceptible at once, viz., two coloured, combined with black and white.

By the term white value (*Valenz*) of the rays of light, Hering understands their power of causing the sensation of white. In the spectrum, this is greatest in the rays corresponding to the neighbourhood of the yellow. Besides this value, which is common to all rays of light, different colour-values belong to the different kinds of rays. The spectrum is divided by the primary green into two halves, in one of which, yellow, and, in the other, blue is the dominant colour; the former, or yellow half, is again divided by the primary yellow into a reddish-yellow and a greenish-yellow part; while the second, or blue half, is divided by the primary blue into a greenish-blue and a reddish-blue. Of these four subdivisions of the spectrum, the first has a white, yellow, and red value, the white and yellow rays alone corresponding to the primary yellow; the second subdivision has a white, yellow, and green value, only the white and green corresponding to the primary green; the third has a white, green, and blue value, the primary blue rays only a white and a blue; the last subdivision has a white, blue, and red value. A primary or fundamental red does not

* Dr. Horstmann in *Cent. für die Med. Wiss.*, 1881.

exist in the spectrum, though the extreme red end makes the nearest approach to it.

Two homogeneous lights, both, for example, having a yellow value, but possessing it in different degrees, can be brought to the same value by increasing the light intensity of the weaker, and they are then equivalent. Two homogeneous lights of different wave-lengths have yellow equivalence when both cause the sensation of yellow with equal power, so that the one light can affect white and green, the other red and white.

Two homogeneous lights, of which the one affects yellow (or red) as powerfully as the other does blue (or green), so that both values cancel one another, are antagonistically equivalent. The idea of value and equivalence is just as applicable to mixed light as it is to homogeneous; so there is an equivalence for similar and for antagonistic colours.

According to the theory of the antagonistic colours, an eye with no perception of red has also no perception of green, and conversely. The same holds good for yellow and blue. In the former case, therefore, the eye is red-green blind; in the latter, blue-yellow blind; total colour-blindness exists when all visual sensations are confined merely to the black and white. Helmholtz explains this latter condition by the absence of two of the three kinds of fibres described by him for red, green, and violet. Such an individual, then, sees everything either red, green, or violet.

A case of unilateral colour-blindness, observed by Becker, saw with the affected eye everything colourless; the spectrum was not shortened, and the brightest spot lay as in the normal eye, *i. e.* neither in the red, green, nor violet, but in the yellow.

Since the examination of acquired colour-blindness, as well as a reference to the normal colour-blindness of the retinal periphery, contradict the theory of Helmholtz, this author is obliged to look for a further hypothesis, as follows. In the totally colour-blind eye three sorts of fibres exist, yet these are always equally strongly stimulated by all kinds of rays, so that the impression of white must always be produced.

The spectrum of the red-green blind breaks up into a yellow and a blue half, which are only distinguishable from one another by difference in shading, from the relative proportions of black and white light, and not by difference of colour-tone. The colourless part does not always lie at the same spot, and on its situation depends the length of the entire spectrum, which sometimes appears shortened. To the red-green blind every light of greater wave-length than that of the colourless part appears yellow; every light of shorter wave-length appears blue; there is never an intermixture of the two colours, in which sometimes blue, sometimes yellow, predominates.

According to Helmholtz's theory, there exist a red-blindness and a green-blindness. In the latter, only the red and violet precipient fibres are in operation; white, yellow, and blue sensations do not occur. The spectrum consists of a red and a violet half. In red-blindness, only the green and violet fibres are in operation. The spectrum consists of these two colours, and is shortened at the one end.

Hering is of opinion that the phenomena of red-blindness are readily explained by his own theory, while they are frequently irreconcilable with that of Helmholtz.

R. MARCUS GUNN.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. LATHAM.—Salicylic Acid as a Specific in Acute Rheumatism. (*Brit. Med. Jour.*, Jan. 1882, p. 46.)
2. SCRIVEN.—The Hypodermic Use of Quinine. (*Lancet*, Dec. 1881, p. 1122.)
3. STIRLING.—Eucalyptus Oil in Lumbago. (*Lancet*, Dec. 1881, p. 1155.)
4. ORTON.—Local Application of Salicylate of Soda in Acute Rheumatism. (*Brit. Med. Jour.*, Jan. 1882, p. 11.)
5. COUPLAND.—Salicylate of Soda in Acute and Sub-Acute Rheumatism. (*Lancet*, Jan. 1882, p. 9.)
6. HOOD.—Salicylates in Acute Rheumatism. (*Lancet*, Dec. 1881, p. 1119.)
7. BRAUN.—Podophyllotoxine. (*Archiv für Kinder.*)
8. KAUFMANN.—The Action of Digitaline on the Cardiac Rhythm. (*Lyon Méd.*, May 15, 1881.)
9. ARCHAMBAULT.—The Application of Blisters to Children. (*Jour. de Méd. et de Chir. Pratiques.*)
10. BARUCH.—Treatment of Carbuncle. (*Amer. Med. Bi-weekly*, Dec. 3, 1881.)
11. SKENE.—The Treatment of Cystitis. (*Cincinnati Lancet and Clinic.*)
12. MARTIN, J. C.—Gossypium Herbaceum. (*American Jour. of Med. Science*, Jan. 1882.)
13. ROE.—Boracic Acid in Gonorrhoea. (*Michigan Med. News.*)
14. Treatment of Infantile Eczema. (*Gaillard's Med. Jour.*)
15. SEGUIN.—The Efficacy of Potassium Iodide in Non-Syphilitic Diseases of the Nervous System. (*New York Hosp. Neurological Soc.*)
16. VON JAKSCH.—The Therapeutic Value of Chinoline. (*Prager Med. Woch.*, Nos. 24 and 25, 1881.)
17. HOFMANN and SCHÖTENSACK.—On Chinoline. (*Pharm. Zeitung*, No. 84, 1881.)
18. KUPKE.—On Chinoline. (*Allgem. Med. Central-Zeitung*, No. 8, 1882.)

1. *Latham on Salicylic Acid as a Specific for Acute Rheumatism.*—In the *Brit. Med. Jour.*, Jan. 1882, p. 46, Dr. P. W. Latham asks, Is salicylic acid a specific for acute rheumatism? and gives a short summary of his theory of the pathology of acute rheumatism. 1. A nervous centre exists, which controls the nutrition of the muscular and other tissues, and which has been termed the 'inhibitory chemical centre'. 2. The action of cold, lowering the power of this centre, may modify the nutrition of the tissues and lead to excessive formation of lactic acid and other products. 3. The presence of lactic acid, in abnormal amount, produces function changes in these nerve-centres, and develops symptoms of acute rheumatism, similar to the production of symptoms in locomotor ataxy, with its joint-affections, by organic changes. 4. If portions of the vagus be involved, then cardiac, pulmonary, or pleuritic complications may develop. 5. Salicylic acid combines with the antecedents of lactic acid, and so prevents its formation. 6. If the remedy be discontinued too early, a relapse will certainly take place. As much of the remedy should be given from the first as can be borne, and great care must be taken to secure a pure form of the salicylic acid; that which is artificially prepared is often dangerous to administer, while pure acid seldom causes unpleasant symptoms.

2. *Scriven on Hypodermic Use of Quinine.*—Mr. J. B. Scriven, in the *Lancet*, Dec. 1881, p. 1122, still claims for the tartrate of quinine all the advan-

tages that he found it possessed in 1876 (vide *Lancet*, vol. i, 1876, p. 650).

3. *Stirling on Eucalyptus-Oil in Lumbago*.—Mr. B. A. Stirling, in the *Lancet*, Dec. 1881, p. 1155, speaks highly of the value of eucalyptus-oil in lumbago. Mr. Stirling believes that, by the free inunction of this agent, he has also often cut short a bronchial attack. The formula advised is, equal parts of the oil of commerce, olive-oil, and belladonna liniment.

4. *Orton on the Local Application of Salicylate of Soda in Acute Rheumatism*.—In the *Brit. Med. Jour.*, Jan. 1882, p. 11, Dr. Chas. Orton states that a solution of salicylate of soda, applied to the inflamed joints on lint covered with oiled silk, is followed by the most marked relief to the pains.

5. *Coupland on Salicylate of Soda in Acute and Subacute Rheumatism*.—Dr. Sidney Coupland, (*Lancet*, Jan. 1882, p. 9) concludes some very instructive remarks as follows. 1. In the majority of cases, the pyrexia and pain of acute rheumatism are speedily removed. 2. Unless the use of the drug be long continued, both the pyrexia and joint affection are liable to recur. 3. Such relapses cannot be wholly prevented, but are often due to indiscretions on the part of the speedily relieved patient. 4. The dose must be properly regulated and gradually diminished. 5. The drug does not definitely affect the cardiac complications. 6. The toxic effects are serious in proportion to the dose, and perhaps to the purity of the drug. Its alleged depressing effect upon the heart has yet to be proved. 7. Salicylate of soda is certainly antipyretic, and, to a considerable degree, antirheumatic. Although it does not lessen the duration of the disease, it yields the speediest relief of all drugs, and thus is the most valuable remedy for the disease yet known.

RICHARD NEALE, M.D.

6. *Hood on Salicylates in Rheumatic Fever*.—At page 1119 of the *Lancet* for Dec., Dr. Hood gives an analysis of 1,200 cases, which shows that, with salicylates, patients lose their pain sooner than those treated otherwise, but that relapse is more frequent, and stay in hospital is longer; while heart-complications are much the same under all treatments, and that, if any advantage can be claimed, it is not by the use of salicylate.

7. *Braun on Podophyllotoxine*.—Podophyllotoxine has not as yet come into use in this country, but new remedies, or new forms of old ones, are constantly appearing, and it is sometimes important to know the doses of such preparations. Dr. Braun (*Archiv für Kinderh.*) gives the dose as $\frac{1}{100}$ to $\frac{1}{8}$ of a grain for a child under twelve months old, up to four years, $\frac{1}{30}$ to $\frac{1}{15}$, and, above that, $\frac{1}{6}$ to $\frac{1}{8}$ of a grain. The most convenient mode of administration is a solution made by dissolving 1 grain in about 2 drachms of rectified spirit. Two to ten drops are given in a teaspoonful of syrup. Podophyllotoxine, which is prepared from the chloroformic extract of the root, is said to be more certain in its action than podophylline.

8. *Kaufmann on the Action of Digitaline on the Cardiac Rhythm*.—M. Kaufmann has made some fresh experiments with digitaline on the heart, and the conclusions to which his researches led him are as follows (*Lyon Méd.*, May 15, 1881). 1. The inhibitory fibres of the heart are paralysed by digitaline, since, under its influence, these fibres, when they are excited, lose the property of arresting the pulsations of the heart. 2. This paralysis reaches the peripheric extremities of the peripheric end of these nerves,

which is no longer excitable. 3. The acceleration of the pulsations of the heart becomes more and more evident, in proportion as the excitability of the inhibitory nerves diminishes. 4. The acceleration reaches its maximum at the moment when the excitability is destroyed, and it must consequently be attributed to the gradual paralysis of the peripheric extremities of the inhibitory nerves of the heart. 5. Very small doses of digitaline produce a long-continued retardation, whilst large doses immediately produce acceleration without preliminary retardation. 6. The inhibitory fibres, paralysed by digitaline, recover their excitability in proportion as the poison becomes eliminated. In conclusion, M. Kaufmann points out that a practical indication may be drawn from these conclusions; viz., that when, for therapeutic purposes, it is desired to retard the pulsations of the heart, we should use very small doses of digitaline. Thus retardation is obtained without intense consecutive acceleration.

9. *Archambault on the Application of Blisters to Children*.—Dr. Archambault, in a lecture reported by M. Paul Lucas-Championnière, in the *Jour. de Méd. et de Chir. Pratiques*, remarks that the utility of blisters for children is often doubtful. Even when it is thought necessary to have recourse to this violent means, their application should be carefully superintended; and, if too prolonged, they may bring on a true burn of the third degree and nervous symptoms, notably convulsions, such as have been noted by Graves and others. For a child a year old, it is sufficient to leave the blister on during one or two hours at most. For a child four or five years old, an application for about four hours is always sufficient. If, when the blistering plaster is removed, no vesicle be formed, it suffices to apply an emollient poultice to produce one speedily. Finally, to prevent the accidents which may supervene with respect to the vesicles, care must be taken, according to Bretonneau's practice, to interpose a layer of oiled silk between the plaster and the skin, both in children and in adults. There are a certain number of contra-indications to the application of blisters. Emaciated children, reduced to a cachectic condition by long-standing suppuration, or predisposed to cutaneous eruption, should not, except under special circumstances, be submitted to blistering. On the one hand, it exhausts their remaining stock of strength; and, on the other, the local irritation set up by the blister may serve as a starting-point for an outbreak of eczema or impetigo. It is especially, however, in diphtheria that the use of blisters should be avoided. M. Archambault says that it cannot be too often repeated, that blisters should never be applied to diphtheritic patients, nor even to those suffering from attacks of which the diphtheritic nature is not absolutely demonstrated. This applies especially to false croup, in which blistering is not of the least utility. In fact, under these circumstances, the blister too frequently ulcerates, and becomes covered with diphtheritic products, which increase the gravity of the disease. Finally, in the eruptive fevers, especially measles, which predispose to gangrenous accidents, the use of blisters is contra-indicated. Blisters applied to the nape of the neck, with the intention of soothing insomnia, delirium, and restlessness, not only do not produce the effect required, but increase the evil. It will also be advisable not to have them applied on parts exposed to friction; they should be applied, by preference, on the anterior and lateral portions of the thorax. The wounds consequent on blisters may become inflamed, and then the denuded

surface should be covered with emollient poultices. If there be ulceration, the following lotion may be used advantageously: Decoction of cinchona, 500 grammes; solution of chloride of lime, 200 grammes. The diseased surface is afterwards powdered with quinine powder. The following ointment may also be useful in similar circumstances: Glycerole of starch, 30 grammes; red precipitate, 50 centigrammes. When the blister becomes coated with a greyish pellicle, somewhat of the appearance of hospital gangrene, an excellent plan is to cover the injured surface with a coat of plaster-of-Paris. It should not be forgotten that all these accidents are generally subordinate to a bad general condition, which must, therefore, be improved.

10. *Baruch on the Treatment of Carbuncle*.—Dr. S. Baruch of New York (*American Med. Bi-weekly*, Dec. 3, 1881) says that the carbolic acid treatment of carbuncle is of great value. Pure carbolic acid, liquefied and held in liquid form by a few drops of glycerine, is freely carried by a camel's hair brush into every open point, after the sloughing channel has been cleansed by a pointed tent of linen. This application must be made thoroughly, but very gently. The pain will not be severe, and its necessary daily repetition will not be dreaded by the patient. After this application, collodion is freely brushed, in three or more successive coats, over the entire diseased surface, even extending a few lines beyond the outline. A doubled piece of linen, having a central opening to admit the sloughing portion of the carbuncle, is now laid upon the collodion-covered surface. A light flax-seed poultice is placed over the former, and renewed several times a day. Tincture of chloride of iron and quinine, milk, and any nutriment the patient can be induced to take, should be freely administered. Anodynes should be prescribed whenever necessary, with a view to allay pain and prevent loss of sleep, but are rarely needed after the first day. If the case progress favourably, the collodion dressing is continued daily, but the carbolic acid may be omitted every other day.

11. *Skene on the Treatment of Cystitis*.—Dr. A. J. C. Skene of Brooklyn gives the following (*Cincinnati Lancet and Clinic*), which he regards as almost specific in its influence, especially in the earlier stages, affording rapid and lasting relief: *R. Acidi benzoici, sodii biboratis, aa grs. x.; Infusi buchu, ʒij.* This quantity is to be taken three or four times a day. The diet should also be regulated, and the skin and bowels kept in an active condition.

12. *Martin on Gossypium Herbaceum*.—The following are the results of a series of experiments upon the physiological action of this drug, by Dr. J. Charles Martin (*Amer. Jour. of Med. Sci.*, Jan. 1882). With frogs, a large amount of the drug was necessary to produce definite results, 20 to 30 minims of the fluid extract being required. Stupor, inattention to surrounding objects, lowered perception of impression, and diminished muscular activity were the prominent symptoms developed. Nerves, such as the sciatic, preserved their irritability, as did the muscles also. Sensibility was only gradually lost as larger amounts were given. Reflex action was not destroyed, and there was no change in the cardiac function, neither depression nor stimulation. When similar injections were made in frogs, the spinal cords of which were divided, and the sciatic nerve on one side of each isolated by tying all the tissues, reflex functions, motility, and sensibility, were found to be unimpaired, and were exactly the same in each limb. Therefore it is concluded that the stupor noted in

the former cases was due to the cerebral effect of the drug. Experiments upon pregnant rabbits, which usually conceive and abort with equal facility, showed no effect from the medicine upon the uterus. Even toxic doses produced no hyperæmia or other effect on this organ. The symptoms manifested were gradually increasing stupor, and in the same ratio impairment of motility and sensibility.

13. *Roe on Boracic Acid in Gonorrhœa*.—Dr. A. J. Roe (*Mich. Med. News*) says he has treated a great many cases of gonorrhœa by means of boracic acid injections, and his results are very satisfactory. He employs the acid in the strength of 10 grains to the ounce of water, morning and evening, after urinating. This treatment usually allays the inflammation, and relieves the pain and chordee, inside of thirty-six hours, and complete cure is generally effected inside of a week or ten days.

14. *Treatment of Infantile Eczema*.—The following mixture is said to have been found very beneficial in the treatment of this affection, viz.: Oil of cajuput, one drachm, combined with one ounce of zinc ointment. Dr. Claiborne of Virginia (*Gaillard's Med. Jour.*) discovered its value through a mistake by his druggist, who put it up in a mixture instead of oil of cade, which was ordered. It cured the patient, and many others since.

15. *Séguin on the Efficacy of Potassium Iodide in Non-Syphilitic Diseases of the Nervous System*.—Dr. Séguin read a paper on this subject at a recent meeting of the New York Hospitals Neurological Society, and stated that the mere fact that iodide of potassium was of service in nervous affections did not prove the latter to be of syphilitic origin. He related three groups of cases, the first of which consisted of instances of organic or 'coarse' cerebral disease. One of these occurred in a boy aged 9, in whom eventually a sarcomatous tumour was found pressing on the left crus cerebri and left side of the pons. The symptoms had been, first, paresis, and afterwards paralysis of the right arm, also of the sixth cranial nerve, staggering gait, and optic neuritis. Blisters behind the ear and iodide apparently did good, although we must not lose sight of the fact that cerebral tumours occasionally make remissions of symptoms without any treatment. In the second case, likewise that of a boy, a fibro-sarcomatous tumour was found in the cerebellum, and had pressed on the venæ Galeni, causing hydrocephalus and separation of the lambdoid and sagittal sutures. The tumour could, during life, be felt in the right occipital region, and pulsated synchronously with the heart. There were exophthalmus, choked disc, and feeble gait, but no paralysis. The patient improved under large doses of the iodide (90 to 150 grains *per diem*), but died some months afterwards. In another case of cerebellar tumour, a remission occurred which lasted four years. The cases of the second group were one of hemi-paræsthesia, which was cured by the iodide, but the patient afterwards died of paralytic dementia; another of paralysis of the third cranial nerve, with ataxy of the limbs, in which some improvement appears to have taken place at first, while latterly it was but slight; and one of right hemi-epilepsy with aphasia, which recovered in two months under the influence of the iodide. The cases of the third group were all of basilar meningitis, and recovered under the same treatment. Dr. Séguin claimed them as non-tubercular, although one had a suspicious history, one brother having died of phthisis, and another brother of brain-fever. In the discussion which followed, most of the

speakers corroborated the benefit of the iodide in non-syphilitic cases, Dr. Amidon considering that in tumour, not the neoplasm itself, but the circulation in its neighbourhood, was influenced by the drug.

JULIUS ALTHAUS, M.D.

16. *Von Jaksch on the Therapeutic Value of Chinoline.*—Referring to the statements of Donath (see LONDON MEDICAL RECORD, Feb. 1882), Dr. von Jaksch says (*Prager Med. Woch.*, Nos. 24 and 25, 1881) that he has given the hydrochlorate of chinoline in typhus and intermittent fevers, as well as in tuberculosis, pneumonia, and erysipelas of the face; and that he finds its antipyretic action to be very inferior to that of quinine, while its taste is very disagreeable, and its administration is very often followed by vomiting. It was useful in two cases of intermittent fever; and, in this disease, it is worth while to make further research as to its efficacy.

17. *Hofmann and Schötenasch on Chinoline.*—These authors (*Pharm. Zeitung*, No. 84, 1881), also refer to Donath's article, and add that very favourable results were obtained from the use of chinoline by Dr. L. Löwy, in forty cases of intermittent fever and intermittent neuralgia (*Wiener Med. Presse*, No. 39, 1881). Independently of Dr. Donath, Dr. Salkowsky of St. Petersburg made experiments with chinoline in the military hospital of that city, and found that, while it did not lower the temperature more than quinine, it was very useful in intermittent fever. Hofmann and Schötenasch recommend for use tartrate of chinoline, of which from half a gramme to a gramme (about $7\frac{1}{2}$ to 15 grains) may be given to adults twice daily. In intermittent diseases, a gramme should be given three hours before the attack, for two or three times, either made up into a bolus or lozenge, or dissolved in 50 grammes each of distilled water and raspberry syrup, with from 1 to 3 grammes of cherry-laurel water. To allay the vomiting which sometimes occurs when the stomach is irritable, a little lemon-juice or a piece of ice may be given after each dose of the chinoline. Chinoline is very useful in the case of children, on account of the bitter taste of quinine. Children from four to eight years old may take half the dose for an adult, in solution; and any unpleasant taste may be masked by means of simple surup. In dentistry, chinoline, dissolved in ether or in alcohol, is an useful antiseptic in caries of the teeth. In ulcerative processes of the mouth, especially of the gums, the following mouth-wash is strongly recommended: Tartrate of chinoline, 1 gramme; distilled water, 140 grammes; rectified spirit of wine, 20 grammes; oil of peppermint, 1 drop; to be mixed, and diluted with from 5 to 8 times as much water when used. Still more diluted (one teaspoonful to a wineglassful of water), it forms a pleasant and refreshing hygienic mouth-wash.

18. *Kupke on Chinoline.*—Dr. Kupke of Posen (*Allgemeine Med. Central-Zeitung*, No. 8, 1882) gives the result of his experience with chinoline. He administered it successfully in eight cases of intermittent fever, one of diphtheria, one of enteric fever, and one of intermittent neuralgia; it seemed, also, to be useful in two cases of anæmia and nervous exhaustion. In addition to being cheaper than quinine, it has, he says, the advantage of not producing disagreeable after-symptoms, such as noises in the ear, deafness, and vertigo. One salt only—the tartrate—is to be recommended for medical practice, on account of its solubility in water and its freedom from disagreeable taste.

A. HENRY, M.D.

MEDICINE.

RECENT PAPERS.

1. DÉJÉRINE.—Anæsthesia in Ataxy. (*Le Prog. Méd.*, No. 8, 1882.)
2. PETRES.—Loss of the Nails in Ataxy. (*Le Prog. Méd.*, No. 8, 1882.)
3. BOUCHERON.—On Uricæmia. (*Gaz. Hebdom. de Méd. et de Chir.*, Sept. 1881.)
4. PENKERT.—Miasmatic Pneumonia. (*Four. de Méd. et de Chir. Prat.*, Feb. 1882.)
5. BROWN-SÉQUARD and CHARCOT.—Paraplegia in Hæmoptysis. (*Le Prog. Méd.*, No. 4, 1882.)
6. CHARPENTIER.—Myxœdema. (*Le Prog. Méd.* No. 5 1882.)
7. HEWITT.—Contagion carried by Domestic Animals. (*Four. of Compar. Med.*)
8. NORMANN.—Death from *Ascaris Lumbricoides* in the Air-Passage. (*Norsk Magazin für Lægevidensk.* ; and *Nord. Med. Arkiv*, Band xiii.)
9. TUCZEK.—A Case of Objective Tinnitus Aurium causing Melancholia. (*Berl. Klin. Woch.*, No. 30, 1881.)
10. TAYLOR.—Amygdalotomy and Suicide. (*Med. Times and Gaz.*, Dec. 1881, p. 758.)
11. HUTCHINSON.—Certain Rare Cases of Chronic Rheumatism in which parts suffered that are usually attacked only in Gout. (*Med. Times and Gaz.*, Dec. 1881, p. 757.)
12. DRUMMOND.—Diffused Hepatic Aneurism causing Fatal Intestinal Obstruction. (*Brit. Med. Jour.*, Dec. 1881, p. 1066.)
13. WILKS.—Ulcerative Endocarditis or Arterial Anæmia. (*Brit. Med. Jour.*, Jan. 1882, p. 39.)
14. KULENKAMPFF.—A Case of Nerve-Stretching in Locomotor Ataxy. (*Berl. Klin. Woch.*, No. 48, 1881.)

1. *Déjérine on Anæsthesia in Ataxy.*—M. Déjérine (*Le Prog. Méd.*, 1882, No. 8), having found that cases of ataxy, with and without anæsthesia, presented the same lesions of the spinal cord, sought its explanation elsewhere. He has found that the nerves of the anæsthetic regions present atrophy of the nerve-tubes, while many of the sheaths are completely empty; and he is of opinion that this degeneration is peripheral in its origin.

2. *Pitres on the Loss of the Nails in Ataxy.*—M. Pitres (*Le Prog. Méd.*, 1882, No. 8) refers to the notice in M. Arloing's recent thesis that M. Joffroy had observed the spontaneous loss, without traumatic cause, of the nails of the great toes in an ataxic patient, and adds to this two similar observations from his own practice. The nails were lost and grew again in each case several times. The occurrence was preceded for some weeks by a dull pain and a sensation of throbbing in the great toe. There was no suppuration or apparent ulceration of the matrix, and the nails were rapidly replaced by new ones of normal conformation.

3. *Boucheron on Uricæmia.*—Dr. Boucheron has communicated a paper to the Académie des Sciences (*Gaz. Hebdom. de Méd. et de Chir.*, Sept. 2, 1881) on the presence of uric acid in the blood, which he asserts to be a very frequent condition, and the cause of a very large number of diseases. For its detection, he recommends the examination of the saliva. One or two grammes of saliva should be dried in a capsule without boiling or so much heat as to turn it yellow, and when it is dry, a rod dipped in nitric acid should be passed lightly over the deposit, and followed immediately by a rod dipped in ammonia. He thinks this murexide test more delicate

and less liable to fallacy than the method of crystallisation.

4. *Penkert on Miasmatic Pneumonia.*—Penkert has published, in the *Berl. Klin. Woch. (Jour. de Méd. et de Chir. Prat., Feb. 1882)* the following account of an epidemic of pneumonia attacking forty-two persons out of a little village of 700 inhabitants in the space of two months, from March 11th to May 14th. The twelve first attacked were children attending the same school. The village consisted of a single steep street, at the bottom of which stood the school-house, opposite the new cemetery, and separated from it by a little lake; the two latter were in a line north-west from the school-house. At the time of the outbreak, and for some days previously, the wind had been north-west, the level of the subsoil water was very high, most of the cellars of the lower part of the village were flooded, and, to judge by the level of the lake, the very porous soil of the new cemetery should have been saturated. Finally, the temperature, which had been low, rose to 45 deg. Fahr. The author believes these conditions favoured the development of the miasmatic germs from the fermenting detritus in the soil of the cemetery, and that the north-west wind carrying these germs swept over only one house in the village—the school-house—and it was there that the first twelve cases occurred. Four other patients were suspected of catching it indirectly, while twenty-eight acquired it by direct contagion. After the Easter vacation, the children who returned to school remained free. Of the forty-two cases, two died. The duration of the disease never exceeded eight days. The hepatisation involved the right lower lobe sixteen times, the left lower lobe fifteen times, and once the left apex. The onset was always sudden, without warning, and the general phenomena were those of acute pneumonia.

5. *Brown-Séquard and Charcot on Paraplegia in Hemiplegics.*—Dr. Brown-Séquard, at the Société de Biologie (*Le Prog. Méd., 1882, No. 4*), having remarked that when in London he had often observed weakness of the limbs on the opposite side in cases of hemiplegia, M. Charcot confirmed his observation, and said that the lower extremity showed the paresis much more than the upper. A few days ago, he had seen an old hemiplegic, who had become paraplegic after a blow on the paralysed leg. He thought the explanation was to be found in the study of spinal sclerosis. Pitres had shown that in many cases of hemiplegia the descending sclerosis is strictly and exclusively unilateral, but much more frequently than is supposed may be found upon both sides.

6. *Charpentier on Myxædema.*—M. Charpentier (*Le Prog. Méd., 1882, No. 5*) publishes another case of myxædema in a child aged four years, admitted into La Salpêtrière. The child was born in Paris of healthy parents; one uncle was insane, and a maternal aunt had rickets; two younger sisters were quite healthy. There was nothing unusual about the child, which was well formed, until, at five months, it was treated for lumbar caries, complicated with convulsive attacks, occurring five or six times a day, and which lasted six months. It was after this that the swelling of the skin was noticed, and the other changes followed. The face is described as being rounded; the eyelids swollen, motionless, the eyes just open, with a melancholy expression, as if in tears; the nose is broadened, the cheeks are blue, cold, tense, and round, and contrast with the rest of the skin, which is yellowish-

white, like honey; the thickened tongue hangs always over the teeth, and saliva drops from the mouth. The skin feels cold, and has a bluish look, especially at the loins, nates, and extremities. The latter are deformed and massive. The palmar hollow is replaced by a rounded surface; the skin is thickened; it does not pilt on pressure, but is soft and elastic; it is not adherent to the subjacent parts; the skin on the thorax and neck is normal. The puffiness of the supraclavicular regions, said to be pathognomonic of cretinism, is absent. The hair is scanty, the nails normal, the teeth yellow; there are no molars. The nostrils are scarcely visible. The digestive, respiratory, and circulatory organs are normal, there is no albumen in the urine. The cry is guttural, hoarse, but infrequent. There is no goitre, no cranial deformity. The ears are normal. There is no spinal deformity, except the remains of lumbo-sacral caries, as understood by the old scars of the cautery. There are no other manifestations of scrofula, and no signs of syphilis. Intellectually, she is a complete idiot, remains motionless, mute, sad, and silent. She does not know how to direct her eyes, cannot hold up her head; she moves her limbs, but, without directing them, cannot stand erect. The case differs from those already described in the age of the patient; and its relation to the spinal caries and convulsive attacks is of interest.

7. *Hewitt on Contagion carried by Domestic Animals.*—Dr. Hewitt (*Jour. of Compar. Med.*) reports an outbreak of diphtheria transmitted by a cat. He had noticed for some days that the cat had some swelling of the glands of the neck, and after a little time it died. The same day, diphtheria of a malignant type showed itself in the family. Two or three children died. Dr. Hewitt himself had a narrow escape, and a serious epidemic followed in the neighbourhood. ROBERT SAUNDSEY, M.D.

8. *Normann on Death from Ascaris Lumbricoides in the Air-Passages.*—Herr I. Normann records in the *Norsk Magaz. for Lægevidensk.*, series 3, Band xi, the case of a boy, four years old, who was one evening seized with difficulty of breathing, which steadily increased until, the next evening, he had severe dyspnoea with prolonged sighing inspiration, while expiration was easy and unimpeded. There was no hoarseness; and nothing could be found on examining the neck. The child died in the night. The disease was supposed to be croup; but the necropsy discovered an ascaris 19 centimètres (nearly 7½ inches) long in the trachea and its larynx, with its upper end projecting 2 centimètres above the rima glottidis. A. HENRY, M.D.

9. *Tuczek on a Case of Objective Tinnitus Aurium causing Melancholia.*—F. Tuczek relates this case in the *Berl. Klin. Woch.*, 1881, No. 30. After abortion, attended by copious hæmorrhage, in the third month of pregnancy, a woman, aged 29, became restless, depressed, and apathetic. Sleep was disturbed by frightful dreams, and the patient had delusions as to her relations being in a state of abject poverty; at the same time, she suffered from continual swimmings in the head and noises in the ears, to which the patient attributed her depression and melancholy. On approaching the patient's ears from either side, a clicking noise was audible at a distance of 20 centimètres (about 8 inches), which resembled the noise produced by clicking the nails, or the passage of an electric spark. The noise was rhythmical, occurring in a frequency double to that of the pulse, and was bitterly complained of by the patient, who likened

it to the ticking of a watch. Hearing was perfect, and examination of the ears showed no lesion. It having been noticed during the use of the speculum, that, when it touched the posterior wall of the meatus, the noise stopped, the meatus was plugged with wadding, with the result that there was an immediate cessation of the tinnitus, and no recurrence of it when, in twenty-four hours, the wadding was removed. Immediate improvement in the general condition of the patient took place, and all evidence of melancholy disappeared.

ROBERT M. SIMON.

10. *Taylor on Amydalotomy and Suicide.*—Mr. R. B. Taylor, in the *Med. Times and Gaz.*, Dec. 1881, p. 758, refers to four cases of suicide in young persons subsequent to excision of the tonsils, observed by Dr. Rubio. The explanation offered as possible is, 'that pharyngeal reflex diseases possess features to some extent similar to those present in persons suffering from fissure of the anus. Just on the same principle as the sufferings of these latter patients induce a state of terror and mental depression bordering upon hypochondriasis, so also a fissure of the pillars of the pharynx, caused by nipping of a portion of the same during excision of the tonsils, inducing thereby a state of constant irritation of the unhealed pharyngeal fissure, kept up by the act of deglutition and the contact of solid and liquid food, may influence the reflex action on the brain sufficiently to lead to perversion of the affected faculties, despondence or anger, and, ultimately, to self-destruction.'

11. *Hutchinson on Rare Cases of Chronic Rheumatism.*—Mr. Jonathan Hutchinson gives a clinical lecture upon certain rare cases of chronic rheumatism, in which parts suffered that are usually attacked only in gout (*Med. Times and Gaz.*, Dec. 1881, p. 757). The case upon which the lecture was based was that of a woman, aged 38. She first had 'rheumatism in her wrists' thirteen years ago, first in the right, then in the left wrist. Then she had general pain in joints, 'a sort of rheumatism'; all the smaller joints were puffy and stiff. There was no gout in the family. When seen in 1877, the fingers were, several of them, considerably distorted, and nearly all their joints were swollen. The wrists were slightly swollen, but moved freely. The shoulders were somewhat stiff. The small joints of her feet suffered in the same way as those of her hands. She had, indeed, the usual conditions of chronic rheumatism (with absorption of cartilage), falling with especial severity on the smaller joints, and attended by thickening and comparatively little synovial effusion. Besides the symptoms usual to chronic rheumatism, she presented affections of certain parts which are peculiarly liable to be affected in gout, and markedly the helices of the ears. On the antihelix of each ear, exactly where gouty concretions are often met with, and with the most exact symmetry, were little inflamed nodules, which, on section, yielded only a little pale gelatinous substance, with no urate of soda. On the tip of the left elbow, also, there was a lump similar to that so frequent in gout. On various parts of the fingers, too, near the joints, but not in them, nor adherent to them, were lumps of thickening, not of stony hardness, nor, apparently, containing chalk; but, again, exactly like those of gout in all other qualities. This case, and another that Mr. Hutchinson has met with, tend to show that the line of distinction between gout and rheumatism is very gravely endangered.

12. *Drummond on Diffused Hepatic Aneurism causing Fatal Intestinal Obstruction.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 1066, a case is reported in which Dr. Arnison performed abdominal section in a case under Dr. Drummond's care, after all therapeutic means had failed to give relief. An incision was made to expose a mass which could be felt through the abdominal walls, occupying the position of the ascending colon. The peritoneum covering this mass was livid, and was mistaken for the intestine and opened. There was found a tubular cavity containing dark offensive blood-clot; within this cavity was also a biliary calculus like a nutmeg. The patient being *in extremis*, further examination was deferred till after death. It was then discovered that an aneurism of the hepatic artery had burst and become diffused, passing down behind the mesentery, and pressing upon and completely occluding the ileum just above the cæcum. A circular space, two inches and a half in diameter, was absorbed on the under surface of the liver, corresponding to the position of the gall-bladder, which, at the *post mortem* examination, could not be found.

13. *Wilks on Ulcerative Endocarditis or Arterial Anæmia.*—A most important lecture upon this subject is to be found in the *Brit. Med. Jour.*, Jan. 1882, p. 39. Dr. Wilks remarks at starting that the symptoms arising from embolism due to cardiac affections, although well described by Kirkes and other observers under the title of embolism, capillary phlebitis, ulcerative and suppurative endocarditis, mycosis endocarditis, etc., are still frequently overlooked and by many altogether unrecognised. In many cases the symptoms are entirely pyæmic, in others mistaken for typhoid fever or subacute rheumatism; but a cardiac *bruit* during life, and infarcts in the spleen, liver, and kidneys, after death, without the pathological symptoms of the disease with which the affection had been confounded, clearly point out the nature of the disease. Dr. Wilks reports some well-marked cases where the disease had been mistaken for typhoid fever and other affections. [In the *Med. Digest*, sections 17, 765, 767, 779, 787, a large amount of interesting matter may be consulted with advantage in reading Dr. Wilks's case; and, in the next edition, in June 1882, it will be seen how much attention has recently been directed to the subject, and how much light has been thrown upon it by numerous observers.—*Rep.*] R. NEALE, M.D.

14. *Kulenkamppf on a Case of Nerve-Stretching in Locomotor Ataxy.*—The patient in this case was a barber, aged 43, with marked ataxy, and intolerable pain in the lower limbs. Both sciatic nerves were stretched, the left so strongly that the body was raised. The wounds were treated antiseptically, and healed by first intention. On the patient recovering from the anæsthetic, he had excruciating pain, in no way relieved by morphia injections. On the day after the operation, there began a cystitis, which quickly became septic, and the patient died on the seventeenth day after the operation in high fever. The operator (*Berl. Klin. Woch.*, 1881, No. 48) believes the cystitis to have been neuroparalytic, like that occurring in fracture of the spine, the roots of the sacral nerves having been so injured by the stretching that the vesical nerves were functionally destroyed.

JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. MASTIN.—Tubular Slough of the Urethra. (*Annals of Anatomy and Surgery*, Dec. 1881.)

2. HOWE.—A Lingual Tourniquet. (*Ibid.*)

3. LEALE.—Pyæmic Parotitis. (*Proceedings of the New York Acad. of Med.*)

4. POINSOT.—Resection of the Ankle. (*Revue de Chir.*, No. 10, 1881.)

5. BRAUN.—Extirpation of the Kidney. (*Deutsche Med. Woch.*, 1881, Nos. 31, 32, 33.)

6. ROSSANDER.—Properitoneal Hernia. (*Hygica*, 1881; and *Nord. Med. Arkiv*, Band xiii.)

7. BOHN.—Rupture of the Urethra with Recto-Vesical Fistula. (*Eira*, 1880; and *Nord. Med. Arkiv*, Band xiii.)

8. AUBERT.—Cyst of the Cranium: Cerebral Compression: Relief by Operation. (*Lyon Méd.*, No. 32, 1881.)

9. SMITH.—Medulla Arthritis. (*Lancet*, Dec. 1881, p. 1077.)

10. ANDERSON.—Reduction of Dislocations by Manipulation. (*Brit. Med. Jour.*, Jan. 1882, p. 10.)

11. OAKELEY.—Complete Posterior Dislocation of the Knee-Joint with Life-long Use. (*Lancet*, Jan. 1882, p. 53.)

12. GORHAM.—Bullet-Wound of the Left Kidney. (*Brit. Med. Jour.*, Dec. 1881, p. 1050.)

13. GREENISH.—Double Vertical Fracture of the Pelvis. (*Brit. Med. Jour.*, Dec. 1881, p. 1056.)

1. *Mastin on Tubular Slough of the Urethra.*—Dr. Mastin describes, in *Annals of Anatomy and Surgery*, Dec. 1881, the case of a man, aged 44, who noticed, fourteen days after an impure intercourse, vesical and urethral uneasiness and a sanious discharge, in which blackish specks and threads were mingled. To relieve this, the patient procured a saturated solution of lead acetate and zinc sulphate, and used the same as an injection. This was employed for three days, when the discharge ceased, the stream of urine also diminishing in size. On the fourth day there was complete retention, and, on examination, the urethral meatus was found occluded with a greyish substance. Gentle traction removed a tubular cast, of the ordinary size of an urethra, in length $2\frac{1}{4}$ inches. In the evening of the same day, after excessive straining, another piece of urethral exfoliation was passed, the length of which was $3\frac{1}{4}$ inches. A few days afterwards, the man was well enough to return to work. The slough was soft and friable, and bore evidence of involving the entire thickness of the mucous membrane. Dr. Mastin remarks on the rarity of the lesion, and attributes its occurrence to the use of the injection. The absence of constitutional symptoms excludes the notion that the pseudo-membrane may have been diphtheritic in its origin. A stricture, of the length of the slough, is predicted as the future of the case.

2. *Howe on a Lingual Tourniquet.*—This instrument is described by Dr. Howe in the *Annals of Anatomy and Surgery*, Dec. 1881. It is of the shape of an ordinary safety-pin, having attached to the inside of the external bar a second movable bar, $1\frac{1}{2}$ inches long, worked by a screw on the external surface. To use the same, the steel pin is inserted into the floor of the mouth opposite the second molar tooth, directed, at first, towards the median raphe of the tongue, then backwards towards the foramen cæcum, and is finally brought out in front of the an-

terior pillar of the fauces. The pin is then closed, and, by using the screw, the movable bar is made to press firmly on the trunk of the lingual artery, and will control all hæmorrhage, and permit the artery to be readily ligatured when divided in removal of the tongue.

T. F. CHAVASSE, M.D.

5. *Seale on Pyæmic Parotitis.*—At a meeting of the New York Academy of Medicine, on Nov. 24th, 1881, Dr. Charles A. Seale read a paper on pyæmic parotitis, and presented two patients, one of whom had lost the gland through suppuration, and the other presented adhesions in the cheek over Stenson's duct. Dr. Seale differs from the numerous writers who think that suppuration of the parotid is due to mechanical occlusion of Stenson's duct. His observations have led him to the conclusion that, when this suppuration occurs in cases of enteric fever, dysentery, or osteomyelitis, it always arises from systemic poisoning from an ulceration of such a low grade, where constitutional changes are constantly going on, that the glands of the body exert their influence to eliminate the *materies morbi*, and so metastatic abscesses of the parotid gland, liver, lungs, etc., are formed. As to the frequency of suppuration of the parotid, Dr. Seale states that it is proved by statistics to be a not very uncommon affection. In illustration of the association of suppurative parotitis with systemic poisoning, the history of four cases is given: one from pelvic cellulitis, one from ulceration of the intestine in typhoid fever, one from extensive ulceration of the mouth and stomach, and one from suppuration of the kidneys following an acute attack of degenerative nephritis. In the same connection, two cases are recorded of metastatic abscesses of the liver, as illustrative of the same provoking cause. Dr. Seale has never seen a case of pyæmic suppuration of the parotid gland end in recovery, when the pus had not been permitted an exit. In three of his cases he had incised the abscess, and in another there had been a profuse discharge of pus from the ears for a period of seven months, the discharge having made its way through the middle ear. In one case only had he seen perforation of the cartilage of the external auditory canal.

4. *Poinsot on Resection of the Ankle.*—Dr. Poinsot of Bordeaux reports, in the *Revue de Chir.*, No. 10, 1881, a successful case, under his own care, of tibio-tarsal resection, and endeavours to show by tables of collected cases that this operation, when performed for the removal of disease, gives most satisfactory results; the mortality of the operation, according to these tables, being almost nothing, and the proportion of failures not higher than fifteen per cent. When other modes of treatment have failed, and when the fungoid process has destroyed the spongy tissue of the epiphysis and tarsal bones, and when suppuration has taken place, and fistulous communications have been established between the interior of the joint and the surface of the limb, is it not better, the author asks, to reset the diseased bone than to wait until the progress of the disease will have rendered amputation the only resource? There can be no doubt that tibio-tarsal resection, though generally allowed to be of great value in cases of severe injury to the ankle, has, as a resort in cases of disease of this joint, long been out of favour both in France and in this country; the main grounds of objection to the operation being the duration of the after-treatment and the frequency of relapse, and also the functional unfitness of the extremity, in consequence of its shortening and of deviation of the foot. Dr. Poinsot, struck by the excellent results of the opera-

tion in his own case, was led to determine, by a study of Spillmann's tables, published in 1869, and of a collection made by himself of subsequently recorded cases, whether the objections to pathological resection of the ankle were really well founded. In thirty-four cases, collected by Spillmann, the proportion of deaths was over 25 per cent., and of failures about 40 per cent. The conclusion drawn by Spillmann, from this collection of cases, was that tibio-tarsal resection, for pathological affection of the ankle, is a very hazardous operation, not so much by reason of its mortality as on account of the subsequent tendency to relapse. In a collection of thirty-two cases, published by Hancock in 1873, twenty-eight of which had not been included in Spillmann's tables, better results were shown; the mortality being about 18 per cent., and the proportion of failures about 25 per cent. Dr. Poinso's table, which includes forty-two instances of tibio-tarsal resection, in most of which the operation was performed after the date of Hancock's record, shows about the same proportion of failures, 25 per cent., but a much reduced mortality, four cases only having been fatal. An attempt is made, by a further analysis of these forty-two cases, to test the influence of Listerism in pathological resection of the ankle. In twenty-one cases that were treated after the operation by Lister's dressings, there were three cases recorded as unsuccessful (14.28 per cent.) In one of the successful cases of this series, the astragalus, os calcis, scaphoid, and also some portions of the metatarsus were removed. W. JOHNSON SMITH.

5. *Braun on Extirpation of the Kidney.*—In commenting on four cases of nephrectomy operated on by Czerny, with two deaths and two recoveries, H. Braun (*Deutsche Med. Woch.*, 1881, Nos. 31, 32, 33) discusses fully the relative merits of incision in the lumbar region and at the linea alba. It has been the custom to make the incision at the linea alba in cases where there is evidence of dislocation of the kidney, or where there is a renal tumour of considerable size, reserving the lumbar operation for cases in which the kidney is about normal in size and situation. From an examination of the records of 63 nephrectomies, he finds that the lumbar incision was employed in 35 cases, with only 11 deaths, while incision through the linea alba was followed by death in 18 cases out of 28. From these facts, Braun argues strongly in favour of the lumbar operation.

ROBERT M. SIMON.

6. *Rossander on Properitoneal Hernia.*—Dr. C. J. Rossander, in *Hygeia* for 1881 (*Nord. Med. Arkiv*, Band xiii, Häft 3), gives a brief account of two cases of properitoneal hernia which he has been able to find in medical literature, and adds a case which came under his notice. The patient, a woman aged 43, had, for more than ten years, had a crural hernia, which could never be completely reduced. Her distress at last became so great that she desired to be submitted to operation, which was accordingly performed under strict antiseptic precautions. As, after the sac had been opened, the hernia, which was only omental, could not be reduced, the case was suspected to be one of properitoneal hernia, and the suspicion was confirmed by closer examination. A diverticulum, an inch long, extended upwards from the hernia, in front of the peritoneal layer of the abdominal wall. The opening between the sacs having been enlarged, the whole mass was reduced. The anterior and posterior walls of the hernial sac were then sewn together as accurately as possible, and the external wound was closed. A small collec-

tion of pus was observed on the seventh day; but it interfered little with the process of healing.

7. *Bolin on a case of Rupture of the Urethra with Recto-Vesical Fistula.*—The principal interest of this case, reported by Herr W. Bolin in *Eira* for 1880, (*Nord. Med. Arkiv*, Band xiii, Häft 3), lies in the manner in which the injury was received, and the symptoms which occurred during the treatment. The patient, a tailor aged 23, who, as far as was known, had never previously suffered from disorder of the urinary organs, ruptured his urethra through violence in riding. The injury was followed by pain, and the passage of urine containing much blood. Attempts to introduce a catheter only produced more copious hæmorrhage; at last, therefore, the bladder was punctured above the pubes, and a drainage-tube was introduced. The surgeon who attended him also applied a ligature around the root of the penis. When Herr Bolin saw him, he removed this ligature, and succeeded in introducing an elastic catheter into the bladder. The drainage-tube was removed two days later. All went on well at first, but at the end of eight days the hæmorrhage returned, and a catheter could not be passed. Suprapubic puncture of the bladder again became necessary. After ten days, the urine began to pass by the normal channel; but now hæmorrhage from the rectum occurred, and an opening of the size of a little finger was found between the bladder and the rectum. The patient could not bear a catheter retained in the bladder, but repeated introduction of the catheter was well borne. The opening gradually contracted, but was not completely healed when the patient left the hospital at the end of a fortnight. A. HENRY, M.D.

8. *Aubert on a case of Cyst of the Cranium: Cerebral Compression: Relief by Operation.*—This case, reported by M. Aubert in the *Lyon Méd.*, No. 32, 1881, has a special interest from the influence which the cure of the cyst had on the intelligence of the patient, in consequence of the raising of the bony table. The cyst, about 5 centimètres in diameter, consecutive on a blow received upon the head twenty years previously, was situated in the lateral portion of the right frontal region, half in the hairy scalp, half in the free portion of the forehead. Opened by thermo-cautery, after an exploratory puncture, it gave issue to a yellow liquid containing crystals of cholesterine. The bed of the cyst was formed by a depressed bony wall. The wound was washed out with carbolic acid and dressed with boracic lint, and precautions were taken to delay union. The bony table rose by degrees; and, at the end of about two months and a half, it was at the same level as the frontal surface. From that moment the patient, who was a married woman about 50 years old, and had no memory at all for the ordinary occurrences of life, and was extremely negligent in all the cares of her household, rapidly became a careful, attentive housewife. This change was so marked and so sudden, as to be noticed by every one who was in the habit of seeing the patient.

9. *Smith on Medullo-Arthritis.*—In the *Lancet*, Dec. 1881, p. 1077, Mr. J. Greig Smith, in a clinical lecture, divides arthritis into medullo-arthritis and synovio-arthritis, one commencing as inflammation of the pink marrow in the cancellated ends of the long bones, the other in the synovial membrane, and both ultimately proceeding to disintegration of all the structures entering into the articulation. In the synovial disease, there is little hyperæmia, and, except in the advanced stage, little pain. Even when there is abrasion of the cartilage, the flabby

anæmic granulations, packed between the denuded surfaces, act as buffers and prevent pain. Grating inside a joint is supposed to mean ulceration of cartilage; but, as has often been pointed out, there may be much abrasion without any grating, when masses of synovial granulations serve to separate the articular surfaces; walking may even be fairly performed, without much pain, with a joint far advanced in synovial disease. A most important diagnostic fact is, that even in the last stages of the synovial form of disease, there is no 'starting' as the patient drops off to sleep. In medullo-arthritis, where a highly sensitive and vascular organ is compressed within a bony shell, there is tenderness during, and a great dread of, any sharp movement. It is in this form of disease that nocturnal startings occur. Two cases are reported of advanced medullo-arthritis of the lower end of the femur, in which the diseased bone and medullary matter were freely scooped away, and a perfect cure resulted. In one case, the blood-clot that filled the cavity left by the gouge became organised, and the wound was perfectly closed in ten days. In the early stages of morbus coxarius, the free opening and cleansing out of the diseased cancelli is strongly advocated, not as a substitute for milder measures, but as a possible preventive of excision and amputation.

10. *Anderson on Reduction of Dislocation by Manipulation.*—Dr. J. H. Anderson describes a ready method of reducing dislocations of the hip and shoulder by simple manipulation (*Brit. Med. Jour.*, Jan. 1882, p. 10). The arm is raised to a level with the shoulder, and the finger inserted under the dislocated head of the humerus, which is then lifted into its socket. A similar procedure is adopted with the hip; the foot being raised from the floor to a height of about twelve inches, the fingers are placed beneath the head of the femur, and lift the dislocated bone into the acetabulum.

11. *Oakeley on Complete Posterior Dislocation of the Knee-joint, with Life-long Use.*—Mr. J. Bagnall Oakeley reports and figures a case of the above injury in the *Lancet*, Jan. 1882, p. 53. The patient, aged 70, when seen, stated that, when nine months old, he fell and damaged his knee-joint, causing complete posterior dislocation. He has worked at brick-making all his life, and has never been laid up on account of his knee.

12. *Gorham on Bullet-Wound of the Left Kidney.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 1050, Dr. J. J. Gorham reports an interesting case, in which the left kidney was wounded. The patient was kept well under the influence of morphia, and he did well until the twenty-fifth day, when the urine was almost free of blood; but on this day he suddenly passed thirty ounces of arterial blood by the urethra, doubtless due to ulceration of a renal artery. For four days his condition was very critical, large quantities of blood being constantly voided from the bladder. On the thirty-fifth day the urine again became free from blood, and he was regaining strength daily.

13. *Greenish on Double Vertical Fracture of the Pelvis.*—Mr. R. W. Greenish gives the notes of a case under the care of Mr. Robinson (*Brit. Med. Jour.*, Dec. 1881, p. 1056), in which a man, sitting across a plank, fell about ten yards, through the plank breaking. He struck the ground with his legs separated, and a portion of the plank between them. The fracture appeared to run through the horizontal ramus of the os pubis, and through its descending ramus or the ascending of the ischium, thence

through the narrowest part of the ilium, just behind the acetabulum. The man was treated by a Bryant's parallel splint, and was about on crutches after six weeks.

RICHARD NEALE, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1. PHELPS.—Treatment of Double Talipes Equino-Varus. (*New York Med. Rec.*, Sept. 24, 1881.)
2. GREEN.—Chronic Club-Foot successfully treated without Tenotomy by Continuous Extension and Stretching. (*New York Med. Jour. and Obst. Rev.*, Nov. 1881.)
3. BRADFORD.—An Appliance for the Correction of Aggravated Club-Foot. (*Boston Med. and Surg. Jour.*, Dec. 1881.)
4. CABOT.—A Wire-Splint for Hip-Disease. (*Boston Med. and Surg. Jour.*, Dec. 1881.)
5. JUDSON.—A Practical Point in the Mechanical Treatment of Hip-Disease. (*New York Med. Gaz.*)
6. TAYLOR.—Location, Age, and Sex, in Caries of the Spine. (*New York Med. Record*, Aug. 13, 1881.)
7. BROWN.—Ankylosis of the Hip-Joint. (*Boston Med. and Surg. Jour.*, June 2, 1881.)
8. WAGNER.—The Treatment of Severe Club-Foot. (*Inaug. Diss.*, 1881.)
9. POORE.—Osteotomy for Genu Valgum. (*New York Med. Record*, Aug. 13, 1881.)
10. LUCAS.—Cross-Legged Progression. (*Clin. Society's Trans.*)
11. PRADIGNAC.—Osteotomy: its Indications and Results. (*Bull. de Thérap.*, Dec. 1881.)
12. VON BERGEMANN.—The Making of Cases for Scoliosis. (*Würzburg. Phys. Med. Sitzungsber.*, 1881, No. 1.)

1. *Phelps on the Treatment of Double Talipes Equino-Varus by Open Incision and Fixed Extension.*—Dr. A. M. Phelps, of Chateaugay, New York, relates in the *New York Med. Rec.* (Sept. 24, 1881), a severe case of what would in this country be called talipes varus, in a girl, aged 6½ years, who was operated upon in the following manner. An incision was made half an inch in front of the ankle joint, extending across the inner side of, and two-thirds the distance across, the soles of the feet, through the skin and cellular tissues. All the contracted parts were divided, the incisions reaching to the bones; the tendo Achillis was also divided. The artery and nerve of the right foot were divided accidentally. The wounds were dressed daily with balsam of Peru and oakum, and the feet kept extended upon a foot-rest 'devised for the purpose'. The wound healed in three weeks; the foot-board was worn for fourteen weeks, the patient using crutches. A Sayre's shoe was then put upon the right foot, and an ordinary shoe with a stiff 'counter' upon the left. 'The patient can walk rather awkwardly without shoes.' Another child, a boy 7½ years old, was also operated upon in a similar manner for varus of one foot, with a like result. The excuse for operating by open incision in these cases was that, in the first patient, an attempt at subcutaneous operative treatment had failed; but failure was almost sure to follow the operation as described. The tendo Achillis, tibialis anticus, and plantar fascia were all divided at one operation, whereas it is an established rule of orthopædic surgery in this country to leave the tendo Achillis until the other parts are stretched, for without the resistance of the tendo Achillis no *point d'appui* is obtained for effecting pressure. Conse-

quently, we are not surprised to read that 'the feet were imperfectly restored to their normal position'.

2. *Green on Chronic Club-Foot successfully treated without Tenotomy, by Continuous Extension and Stretching.*—Dr. J. S. Green (*New York Med. Jour. and Obst. Rev.*, Nov. 1881) protests against the frequent use of the tenotome. He asserts that forcible reduction of the deformity, both with and without tenotomy, has frequently failed. It has failed after tenotomy, because the parts do not accommodate themselves to the rapid reduction. It has failed without tenotomy, because misdirected and misapplied force has produced excoriations of the soft parts and synovitis of the joints. An instrument for reducing club-foot should be made to act as follows: 1. To separate as much as possible the articular surfaces of the bones by extension, while pressure is brought to bear in the required direction; 2. To produce gradual reduction of the foot to a normal position by continuous stretching, acting exactly in an opposite direction to the lines of the deformity. The writer advocates Dr. Stillman's apparatus. This 'club-foot twister' consists of a local extender provided with a slotted arc for gradual movement placed on each side of the ankle-joint, and another placed in front of the arch of the foot. Below, these are attached to a flexible felt or leather sole, on which the foot is firmly fastened by bandages; and, above, they are connected to metal terminal plates, which are bound down to the leg by some immobile dressing. The writer records a case treated by Dr. Stillman and himself, which they succeeded in curing after tenotomy had failed.

3. *Bradford on an Appliance for the Correction of Aggravated Club-Foot.*—Dr. Bradford showed an apparatus at a meeting of the Suffolk District Medical Society (*Boston Med. and Surg. Jour.*, Dec. 1881). It is a modification of Dr. Morton's instrument. The power for stretching the foot after tenotomy is applied by means of a long screw, similar to that of the osteoclast; the force bears upon the inner side of the foot; the os calcis and astragalus are fixed by being bandaged to a plate connected with that on which the screw works, and also by means of a strap wound round the foot over the astragalus. The appliance is so arranged that, besides the forcible abduction of the foot, the foot can be twisted and flexed. Reduction is effected by force, the patient being under the influence of an anæsthetic. The foot is fixed in the improved position by plaster-of-Paris bandage. Severe pain is felt for a few hours. A second operation may be requisite.

4. *Cabot on a Wire Splint for Hip-Disease.*—Dr. Cabot showed a splint at a meeting of the Suffolk District Medical Society (*Boston Med. and Surg. Jour.*, Dec. 1881). It is a modification of Thomas's splint. The advantages claimed for it over others in general use are—that it can be easily made; it can be adjusted without difficulty; extension of the limb can be effected; and it completely immobilizes the joint.

5. *Judson on a Practical Point in the Mechanical Therapeutics of Hip-Disease.*—Dr. Judson read a paper before the Medical Society of New York, Nov. 28, 1881 (*New York Med. Gaz.*). He referred to the difficulties met with in treating cases by Taylor's splint, from the relaxation of the straps fastened to the adhesive plasters at the lower part of the apparatus, whenever the patient assumes the erect position, and throws his weight upon the splint. Dr. Judson suggests a modification in the adjustment of

the perineal straps, making them short, and attached to a low perineal band. [This modification is another attempt to treat hip-joint disease by an apparatus, without that absolute recumbency which cautious surgeons on this side of the Atlantic consider necessary for the successful treatment of this disease during its active stages.—*Rep.*]

6. *Taylor on Location, Age, and Sex in Caries of the Spine.*—Dr. H. L. Taylor (*New York Med. Rec.* Aug. 13, 1881) found, in 300 cases, that every vertebra was diseased except the first cervical, where disease is not readily recognised. There may be said to be three centres of maximum liability: first, at the sixth and seventh cervical vertebræ; second, about the eighth dorsal; third, at the second and third lumbar. The frequency of disease is greatest in the dorsal region, and nearly as great in the lumbar, but less frequent at the cervical. The points of least liability to the disease are from the first to the fourth dorsal and the eleventh and twelfth dorsal vertebræ, besides the two extremities of the spinal column. These facts the writer explains (assuming that injury is the chief inducing cause of Pott's disease) by showing that the regions of greatest liability to disease are the regions most exposed to jar. The dorsal convexity is the most vulnerable region of the spine, not only because of its mechanical relation to the curve of the spine, but also as, owing to its connection with the ribs and sternum, it is more liable to receive a jar communicated from blows than the cervical or lumbar region. The pressure, however, of the superincumbent mass neutralises this immunity in the lumbar region. The upper dorsal region is to an extent protected by the arms and scapulæ, which, not being fixed to the spinal column, break the jar of a fall. The upper lumbar may be regarded as being placed at the point of the 'natural hinge' between the upper and lower halves of the body. In regard to age, in 375 cases, 226 were under five years when the disease began, 68 were between 5 and 10, 24 between 10 and 15, and so on, the number diminishing in each decade. The disease began in 77 cases before the second year. Out of 412 cases, 235 were boys, 177 females.

7. *Brown on Ankylosis of the Hip-Joint.*—Dr. Buckminster Brown (*Boston Med. and Surg. Jour.*, June 2, 1881) describes an apparatus for correcting deformity, after division of tendons and muscles or cicatricial tissues, followed by forcible rupture of deeper seated impediments to motion. A block of wood, carved to fit the buttock, is secured by well padded straps passing over the ilia. At each side of the block is a narrow bar of steel extending to the knee, where a band grasps the thigh. Two ratchet-screws allow extension and flexion, abduction and adduction.

8. *Wagner on the Treatment of Severe Club-Foot.*—Dr. Wagner (*Inaugural Diss.*, 1881) says that when removal of bone is necessary, it is a question whether the astragalus alone, or the cuboid alone, or both bones, should be removed. Ablation of the astragalus alone has been very successful, but sometimes removal of the cuboid and the head of the astragalus together will be desirable. Lücke obtained an 'excellent result' by removing the head of the astragalus and the tip of the fibula.

9. *Poore on Osteotomy for Genu Valgum.*—Dr. Poore, in the *New York Med. Record*, Aug. 13, 1881, states that he prefers Dr. Macewen's operation to those which open the joint. Sixteen cases were operated upon without 'thorough Listerism'; and in one only was there any considerable suppuration, and in only

one did the temperature rise above 99.5 deg. (viz., to 102 deg. Fahr. for one evening). In a discussion on this paper, Dr. Weir advocated Delore's method of forcible straightening in young patients, but not in those above 13 or 14 years of age. He referred to Mikulicz, who experimented upon the dead body and ruptured the external lateral ligament ten times in nineteen cases, the ages of the individuals ranging from 19 to 23. Santi ruptured the external lateral ligament nine times in twelve cases. Delore found separation at the epiphyseal junction in two children after operation (ages 7 and 3). Colin's osteoclast also produced separation of the epiphysis in some cases.

10. *Lucas on Cross-Legged Progression.*—Mr. Clement Lucas describes (reprint from *Clin. Soc. Trans.*) a peculiar and characteristic gait, which is brought about by disease and consequent ankylosis of both hip-joints. He has not been able to find any reference, in general surgical literature, to this deformity. He describes two cases which he brought before the Clinical Society. He thought that ankylosis had taken place in the hip-joint first attacked, before disease had progressed far in the other. The patient had then walked with crutches, bearing his weight on the convalescent limb, the other being rested across it. Eventually, the second hip having become ankylosed, the patient was able to walk without crutches in a peculiar cross-legged manner. In progression, these individuals walk from their knees, using these joints in place of the hips. In the case of one patient, a boy, ordinary pulpy or strumous synovitis was doubtless the original disease, whereas, in the other, the disease was probably osteo-arthritis. In the latter case, no dislocation had occurred at the hip-joints, and it was recommended that an attempt should be made to break down the ankylosis under an anæsthetic before resorting to a more serious operation.

E. NOBLE SMITH.

11. *Pradignac on Osteotomy, its Indications and Results.*—Dr. Pradignac, in his *Thèse de Paris*, 1880, and *Bull. de Thérap.*, Dec. 1881, after a clinical study of the indications of osteotomy, arrives at the following conclusions. 1. In rickety deformities of the lower limbs, in the stage of osseous eburnation, simple or cuneiform osteotomy, according to circumstances, should be performed on patients from seven to ten years old. 2. Ankylosis of the lower jaw imperatively demands it. Simple osteotomy should be performed by Rizzoli's method. In ankylosis of the hip-joint in young children, the neck of the femur should be fractured; in adults, intertrochanteric and subtrochanteric osteotomy should be performed. In ankylosis of the knee, with intimate fusion of the bones, it is the only method of treatment. Cuneiform excision is especially indicated here. In ankylosis of the tarsus, osteotomy is likewise a desirable operation. 3. In badly united fractures, when extension or rupture of the callus has failed, osteotomy is indicated. 4. In the genu valgum of adults, total osteotomy is preferable to partial. In all cases, Lister's dressing is a valuable aid, which must not be neglected.

12. *Von Bergmann on the Making of Cases for Scoliosis.*—Von Bergmann (*Würzburger Phys.-Med. Sitz.*, No. 1, 1881) prefers poroplastic felt to plaster-of-Paris in the manufacture of corsets for cases of scoliosis. Recognising the difficulty of getting a perfect fit of the jacket, he advocates having always ready a series of jackets modelled, as far as possible, to the human form, and of various sizes.

The patient is suspended, and one of these jackets fitted on, being cut out, of course, as required, and then gradually moulded to a perfect shape by being warmed over a copper shape fitted with hot water. Like Sayre, von Bergmann inserts a large pad on the concave side of the scoliosis, which he removes after hardening of the case. R. M. SIMON.

PATHOLOGY.

RECENT PAPERS.

1. DÉJÉRINE and LOLOIR.—Degeneration of Cutaneous Nerves in Bed-Sores. (*Bull. de la Soc. de Biologie*.)
2. OBERST.—Metastatic Giant-Celled Sarcoma commencing in the Femur. (*Deutsches Zeitschr. für Chir.*, Band xiv.)
3. HJELT.—Limited Atrophy of the Heart. (*Finska Läkarsällskapets Handl.*; and *Nord. Med. Arkiv*, Band xiii.)
4. BERNER.—Large Tumour of Kidney in a Child. (*Norsk Magaz. for Lægevidensk.*, 1881; and *Nord. Med. Arkiv*, Band xiii.)
5. HARTZ.—Inversion of the Viscera. (*Ertzl. Intell.-Blatt.*, No. 22, 1881.)
6. MACLEOD.—Rupture of the Heart. (*Brit. Med. Jour.*, Dec. 1881. p. 1051.)
7. LOLOIR.—Calcification of the Gall-Bladder. (*Le Prog. Méd.*, No. 6, 1882.)
8. SUCHARD.—On Ainhum. (*Le Prog. Méd.*, 1882, No. 6.)
9. PONCET.—The Retina and Optic Nerve in Ataxy. (*Le Progrès Méd.*, 1882, No. 8.)
10. STRAUS.—The Changes in the Kidney after Ligation of the Ureter. (*Le Prog. Méd.*, No. 5, 1882.)

1. *Déjérine and Leloir on Degeneration of Cutaneous Nerves in certain Bed-Sores which occur in the Course of Spinal or Cerebral Affections.*—M. Déjérine and M. Leloir published in the *Archives de Physiologie* of 1881, a paper which demonstrated the nervous origin of certain bed-sores. The present communication, made to the *Bull. de la Soc. de Biologie*, demonstrates that, when sores appear in the course of cerebral affections or affections of the spinal cord, similar changes take place. Cutaneous nerves prepared by osmic acid and picric acid, two hours after the death of the patient, were, on microscopic examination, seen to have undergone great changes; there was not a single healthy tube, the greater number were simply empty sheaths; the others were in a state of advanced degeneration. The degeneration presented the ordinary features of a parenchymatous neuritis in a very high degree. The nerves, examined at a distance of 8 centimètres from the sores, were as much altered as those near it. M. Déjérine concludes from this that the nervous degeneration cannot be attributed to the cutaneous lesion.

W. VIGNAL.

2. *Oberst on a case of Metastatic Giant-Celled Sarcoma commencing in the Femur.*—Oberst reports (*Deutsche Zeitschr. für Chir.*, Band xxiv, s. 409) a case of myelogenous sarcoma occurring in a man aged 21, in whom a tumour, commencing in the internal condyle of the right femur, attained, in three months, an enormous size. An experimental incision, after the application of Esmarch's bandage, was followed by a rush of semi-fluid, semi-coagulated blood, and at the bottom of the incision the finger could be introduced into a large hollow, in which lay the almost

destroyed condyle. Amputation at the middle third of the femur was resorted to; but a recurrence of the growth in the stump, three months later, necessitated disarticulation at the hip-joint. Temporary recovery followed; but in seven weeks the patient became collapsed, and died after a few attacks of dyspnœa. On examination of the leg, there was found, in communication with the hollow part of the bone, a blood-cavity, the wall of which was partly ossified, and showed, in parts, a thin layer of tumour-tissue stretching to it from the inner side of the epiphysis. Microscopic examination showed the growth to be a sarcoma, possessing very little intercellular substance, a few giant-cells, and densely infiltrated with blood-corpuscles. Pulsation of the tumour had not been observed during life, but the free communication of several large arteries with the blood-cavity rendered it probable that pulsation or a bruit had existed. In addition to recurrence of the growth in the stump, there were found several large growths in the lungs, one of which had perforated the right pleura, and been followed by a considerable hæmorrhage into that cavity. Microscopically, the growths in the lung, as in the leg, proved to be a very vascular and soft giant-celled sarcoma.

ROBERT M. SIMON.

3. *Hjelt on Limited Atrophy of the Heart.*—Herr O. Hjelt relates, in *Finskaläkaresällsk. Handl.*, Band xxii (*Nord. Med. Arkiv*, Band xiii, Häft 4), the case of a man aged 79, who, about four and a half months before his death, began to complain of pain in the chest. From this time, there was increasing dyspnœa, and at the same time the legs first and then the whole body began to swell. On his admission into hospital, the heart's beat was irregular; the sounds were weak but clear; the pulse was small, soft, about 80; the urine was dark in colour, scanty, and slightly albuminous. At the necropsy, the heart was found to be 15 centimètres (about 6 inches) long and 16 centimètres broad, semilunar in form, with an obtuse apex, formed of both ventricles. The left ventricle was large; its muscular structure in front had an uniform pale brown colour, and was $2\frac{1}{2}$ centimètres (one inch) thick; on the other hand, the posterior and upper part of the ventricular wall was only one centimètre thick, and was pervaded by firm greyish-white bands of connective tissue, which almost entirely replaced the muscular structure, and projected internally in the form of a firm network surrounding the delicate trabeculæ. The pericardium at this part was thickened. The posterior papillary muscles were small and atrophied; the anterior were large. The chordæ tendineæ were of usual thickness. The left auriculo-ventricular orifice was somewhat dilated, and the mitral valve was thickened at the apex. The aortic and semilunar valves were normal. The right ventricle was also dilated, and its wall thickened. The valves were normal. The left coronary artery was sclerosed. The right coronary artery contained about 4 centimètres (1.4 inches) from its origin, a firm red, firmly adherent thrombus.

4. *Berner on a Large Sarcoma of the Kidney in a Child.*—Bernier relates, in the *Norsk. Mag. für Lægevidensk.*, 1881 (abstract in *Nord. Med. Arkiv*, Band xiii), the case of a boy aged 6 years, who, in August 1880, received a contusion in the back. This was followed by severe pains, extending to the hypochondrium and groins; there was also pain on moving the spinal column, which was curved to the right. Constipation and dysuria appeared, and the urine contained traces of blood and albumen. In the beginning of September, a tumour was dis-

covered lying deep in the abdomen, and projecting forward under the costal arch. In the course of a month, it grew to the size of a child's head; it continued to increase, until it nearly filled the abdominal cavity. It was uniformly smooth, tense, fluctuating, and immovable, and gave a dull sound on percussion. After this, there was œdema of the lower limbs, abdominal wall, and back, with severe dyspnœa; the patient steadily lost flesh and strength, and died in February 1881. At the necropsy, a tumour was found growing from the right kidney. It filled the whole abdomen, being covered on the left of the middle line by peritoneum, and on the right lying in contact with the abdominal wall. It weighed 5,800 grammes (12¾ lbs. avoirdupois), and was 27 centimètres (10.6 inches) long, and 20 centimètres (7.8 inches) broad. On microscopic examination, it presented the character of a round-celled sarcoma.

5. *Hartz on Inversion of the Viscera.*—Dr. Hartz (*Aerzt. Intelligenz-Blatt*, Nov. 22, 1881) makes an addition to the list of cases in which inverted position of the viscera has been found. The subject was a woman aged 32, who died of phthisis. During life, the heart-beat was found to be on the right side; and the liver could not be felt in its normal position, while there was dulness, which could only be referred to this organ, on the left side. The necropsy showed inversion of the position of all the thoracic and abdominal organs.

A. HENRY, M.D.

6. *Macleod on Rupture of the Heart.*—Dr. Neil Macleod, in the *Brit. Med. Jour.*, Dec. 1881, p. 1051, records a case of a man, aged 58, previously not known to be ailing, who was seized, at 5 A.M., with a violent pain in the chest. When seen at 8 A.M. he bore an anxious appearance, and complained of great pain in the middle line along the whole length of the sternum; he had great dyspnœa, with a weak voice. There was no lividity. The right pulse could scarcely be felt; the left was weak. The heart-sounds were feeble; no bruit. At noon he felt better, and stated that he had felt quite well up to the moment of seizure. At 6 P.M. he suddenly died. A dark line was found, on the *post mortem* examination, about an inch long, on the anterior wall of the left ventricle. The pericardium was full of blood-clots, but no distinct opening could be detected in the dark line; but, when water was poured into the heart, it slowly oozed through tiny openings in the line. Very extensive disease of the vessels of the heart and endocardium was also present, and yet there was no previous history of heart-trouble.

RICHARD NEALE, M.D.

7. *Leloir on Calcification of the Gall-Bladder.*—M. Leloir reports (*Le Progrès Méd.*, 1882, No. 6) the case of a woman who presented, besides the signs of advanced phthisis, a tumour below the inferior border of the liver, of the size of a fist, hard, not easily movable, painless. Its nature was not determined during life. On opening the abdomen, a pyriform tumour was observed to occupy the position of the gall-bladder. It was 10 centimètres long, by 5 broad, and very hard. On section, its walls were 3 to 5 millimètres thick, and completely calcified; it contained a yellowish liquid full of shining plates of cholesterine, amid which floated some broken fragments of biliary calculi, about fifty altogether. The tumour was of a whitish-grey colour, covered by thickened peritoneum, and adherent to the under surface of the liver. The cystic duct was completely obstructed.

8. *Suchard on Ainhum.*—M. Suchard gives (*Le Progrès Méd.*, 1882, No. 6) the following details of the

microscopical examination of one of the thumbs from a case of this disease presented some time ago at a meeting of the Société d'Anatomie in Paris. The skin showed considerable changes near the characteristic groove; opposite the deepest part of this there was a large bundle of dense connective tissue, thickest in the mesial plane, and composed of white fibrous tissue, without admixture of elastic fibres. In its neighbourhood, the sweat-glands seemed to have been pushed aside by this development of fibrous tissue, or even suppressed altogether where it was densest. The papillæ had disappeared in the lowest part of the groove; laterally, they were flattened or elongated. In the part of thumb beyond the groove, there were only traces of the fatty degeneration which has been described; probably because the constriction of the band was still too incomplete to interrupt the circulation, and determine fatty necrobiosis. The radial and ulnar arteries, and the median and ulnar nerves, were examined carefully, but presented no appreciable changes.

9. *Poncet on the Retina and Optic Nerve in Ataxy.*—M. Poncet (*Le Progrès Méd.*, 1882, No. 8) has found in an ataxic patient, blind for ten years, the following lesions. In the central portion the optic nerve presented complete fatty degeneration, colourless vesicles, granulation without hypertrophy of the neuroglia, prolongations of the sheath, or multiplication of the cells of the neuroglia. In the orbital portion there was the same degree of granular fatty degeneration, but the fibrous prolongations of the sheath were hypertrophied, and there was perivascular sclerosis. The cells of the neuroglia and the fibres of the tissue presented no proper hypertrophy. The sclerosis was rather relative than real; it was due to the crowding together of the connective tissue after the degeneration of the nervous portion. In the retina, the fibres of the optic nerve and the ganglionic cells were destroyed; the cerebral plexus was a little altered; all the other external layers, including the cones, were healthy. He confirms his previous descriptions (Perrin and Poncet, *Atlas des Maladies Profondes de l'Œil*, pl. 34), and attributes the blindness and atrophy of the nerve and retina to a central nervous cause.

10. *Straus on the Changes in the Kidney after Ligature of the Ureter.*—M. Straus has brought a communication (*Le Progrès Méd.*, No. 5, 1882) before the Société de Biologie, in the name of himself and his interne, M. Germon, on the changes in the kidney following ligation of the ureter. They operated with every antiseptic precaution, and with very favourable results. They found that the consequence was hydronephrosis of the organ, characterised microscopically by dilatation of the tubules, followed by atrophy and collapse, without any interstitial nephritis. This result differs from that of MM. Charcot and Gombault; but they attribute this difference to their antiseptic precautions.

ROBERT SAUNDEY, M.D.

ANATOMY.

RECENT PAPERS.

1. *BABER.*—Researches on the Minute Structure of the Thyroid Gland. (*Phil. Trans.*, part iii, 1881.)

2. *HANNOVER.*—The Primordial Cartilage and its Ossification in the Human Cranium before Birth. (*Nord. Med. Arkiv.*, Band xiii.)

3. *ELSBERG.*—The Structure of Hyaline Cartilage. (*Med. News*, Jan. 7, 1882.)

4. *SABOURIN.*—The Biliary Lobule. (*Le Progrès Méd.*, No. 2, 1882.)

5. *RAAB.*—On the Anatomy of the Arteries of the Palm of the Hand. (*Wiener Med. Jahrb.*, 1880, s. 179.)

6. *SINÉTY.*—Ciliated Cells of the Ovary. (*La Tribune Méd.*)

7. *STRAUCH.*—The Human Sternum. (*Inaug. Dissert.*, Dorpat, 1881.)

8. *MAIER.*—The Ganglia in the Uriniferous System of Man and some Animals. (*Virchow's Archiv*, Band lxxxiv.)

1. *Baber on the Minute Structure of the Thyroid Gland.*—In a paper in the *Phil. Trans.* for 1881, part iii, Dr. Baber gives a detailed description of the structure of the component parts, and their relation to the lymphatics of the thyroid of the dog, horse, rabbit, ox, sheep, cat, pigeon, fowl, rook, tortoise, frog, skate, and conger-eel. Amongst the numerous details, the following new and important facts may be specially mentioned. 1. The vesicles of the thyroid of the adult animal generally form closed cavities; in the gland of young dogs much branched vesicles occur, but these are merely forming a stage in the growth of the gland, and indicate that an increase in the number of vesicles is taking place. 2. The shape of the epithelial cells lining the vesicles varies in the different animals, but the general tendency is towards the columnar form. Amongst the epithelial cells exists a delicate reticulum. Between the epithelium of the vesicles and the epithelium of the intervesicular lymphatics, exists a delicate layer of connective tissue, forming, at the same time, the matrix for the capillary blood-vessels. 3. The vesicles contain, as a normal product, a homogeneous or granular material, the 'colloid' substance of the author. The most important point is the presence of blood in considerable quantities in the vesicles of perfectly normal glands. The red blood-corpuscles are found in various stages of disintegration and discoloration. It follows from this, that the passage of red blood-corpuscles into the vesicles, and their destruction therein, is a normal occurrence. [This fact may have an important bearing on the pathology of the gland, since by it the anæmia associated with hypertrophy of the thyroid (goître) may be readily explained.—*Rep.*] The blood thus effused contributes to a large extent to the formation of the above 'colloid' substance. 4. The lymphatics of the thyroid of the dog, the intervesicular capillary lymphatics, as well as the afferent trunks, contain the same homogeneous 'colloid' material as the vesicles; whence it follows that the products of the vesicles, having been absorbed by the lymphatics, become finally discharged into the general circulation, and thus enter the constitution of the normal blood. In the thyroid of the pigeon, and in that of the conger-eel, no lymphatics could be demonstrated; but in the tortoise there exists a rich network of them. In the dog, and in the last-named animal, the arteries are ensheathed more or less completely in their accompanying lymphatics. 5. Undeveloped portions, in the shape of convoluted solid cylinders, of epithelial cells, are frequently met with. The paper is copiously illustrated, giving good representations of all the more important facts.

E. KLEIN, M.D.

2. *Hannover on the Primordial Cartilage and its Ossification in the Human Cranium before Birth.*—The *Nordiskt Med. Arkiv*, Band xiii, Häft 2, contains an abstract of an article by A. Hannover on

the development of the human skull, founded on the examination of twenty-five embryos of from two to eight months. The primordial cartilage, he says, is the foundation of the occipital bone, the sphenoid, the ethmoid and the lower turbinated bones, the temporal bones, and the ossicula auditus. The author's representation of the histology of the production of bone entirely supports the assumption of the origin of the true osteogenous tissue from periosteum. He entirely denies the transformation of cartilage-cells into bone-cells; and, in order to prove that the cartilage-cells have nothing to do with the osteoblasts, he refers, as instructive objects for examination, to the lowest division of the squamous portion of the occipital bone in a three months, foetus, to the lancet-shaped ossification of the basilar portion of the occipital bone, and to a nucleus of bone observed by himself at the point of the internal pterygoid process, which afterwards becomes the hamulus pterygoideus. He also denies the direct transformation of cartilage into bone-substance in the frontal bone of the calf, as assumed by Gegenbaur. After some remarks on the ossification of bone developed between membrane, he describes the manner in which the separate cranial bones are formed in the primordial cartilage. With the exception of the upper part of the occipital portion, which is ossified in membrane, the occipital bone has four points of ossification. In the sphenoid bone, the cornua are formed in membrane; the whole of the rest of the bone, including the internal wing of the pterygoid processes, is developed in the primordial cartilage from not fewer than twenty-four points of ossification (besides the two for the cornua); the number may, however, on closer research, be reduced to eighteen. The ethmoidal portion of the primordial cartilage is somewhat greater than the bone formed in it; the cribriform lamina is formed in membrane, but the inferior concha in the cartilage, so that this should be reckoned as a part of the ethmoid bone. This bone has, in the embryo, centres of ossification only for the concha and the cribriform lamella. Of the temporal bone, only the mastoid and petrous portions belong to the primordial cartilage. Dr. Hannover gives a full description of each part, and remarks, that the recognised change of position of the membrana tympani during growth from a nearly horizontal to a nearly vertical position, is due to a peculiar turning of the whole petrous portion. All the three ossicles of the ear originate as a connected cartilaginous outgrowth from the inner cartilaginous wall of the tympanum. In another section of his article, Dr. Hannover describes the formation of vertebrae in the human cranium. He defines a vertebra as an originally cartilaginous, afterwards osseous, portion of a column which contains a portion of the central nervous system and of the chorda dorsalis. The chorda is beset with nuclei (notochord), and these indicate the limits between the vertebrae; the nuclei are smallest at the uppermost end of the chorda. The nuclei met with in the primordial cranium are therefore the right starting points for the demonstration of the vertebrae of the skull. Here, two constant nuclei are found: one in the middle of the basilar portion, another at about the situation of the sphenoid-occipital synchondrosis. The author regards the basilar portion as a double vertebra. The body of the third cranial vertebra he describes as being formed of the cartilage of the body of the sphenoid and the cribriform plate.

A. HENRY, M.D.

3. *Elsberg on the Structure of Hyaline*.—At a meeting of the New York Academy of Medicine (*Med. News*, Jan. 7, 1882) Dr. L. Elsberg gave an account of the views at which he had arrived in making an histological investigation of the cartilages of the larynx, with regard to the structure of hyaline cartilage. As the result of his investigations, Dr. Elsberg was not only able to confirm the views of Heitzman and others, that there are cilia-like offshoots or prolongations of the substance of the cartilage-corporuscles penetrating into the basis substance, but had been able to satisfy himself that these offshoots form a connecting reticulum through the basis substance, and that there exist in this network masses of living matter. Hyaline cartilage is, therefore, a mass of living matter, in which blocks of basis substance are imbedded; and Dr. Elsberg believed that the communication of these protoplasmic processes with each other and with the surrounding tissues permit nutrition to be carried on without the intervention of 'juice-canals'.

4. *Sabourin on the Biliary Lobule*.—Dr. Ch. Sabourin (*Le Progrès Méd.*, No. 2, p. 21) describes the biliary lobule as quite distinct from the generally received notion of the hepatic acini bounded by the portal spaces, and having the radicles of the hepatic vein at their centres. The biliary lobule, according to M. Sabourin, is pyramidal in shape, its base is directed towards the portal spaces, while the hepatic radicles are at its angles. He gives no proof of this statement, but says it rests upon certain pathological observations, which he promises to publish elsewhere.

ROBERT SAUNDBY, M.D.

5. *Raab on the Anatomy of the Arteries of the Palm of the Hand*.—Raab (*Wiener Med. Jahrb.*, 1880, s. 179) found in 108 upper extremities eight with abnormalities of the arterial system. Every abnormal condition of the course of the ulnar or the radial artery was combined with abnormalities in the palmar arch. He describes three cases, viz.: 1. High origin and superficial course of the radial artery, and anastomosis between the radial and ulnar above the transverse carpal ligament; 2. High division of the radial (10 centimètres above the carpus), the volar branch of which inoculated with the ulnar above the carpal joint; 3. High division of the brachial artery, with anastomosis of the radial and ulnar above the transverse carpal ligament.

6. *Sinety on Ciliated Cells of the Ovary*.—In the Société de Biologie, in the meeting held December 17th, 1881 (*La Tribune Méd.*), M. Sinety announced that he had found ciliated cells on the surface of a normal human ovary. As the ovary of the other side was cystic, and as ciliated cells are often found in ovaries which are pathologically changed, he thought that the presence of these cells might indicate a pathological condition. But sections of the ovary showed no pathological condition whatever, and scrapings from the surface showed large ciliated cells. This fact is of importance, for these cilia must assist in transporting the ovum to the fimbriated extremity of the Fallopian tube, after the rupture of a Graafian follicle. The fact that these cells had previously been overlooked by investigators, was explained by the speaker as due to the faulty methods of examination. M. Duval spoke of the importance of the discovery, and said that it confirmed his views, previously expressed, as to the movement of the ovum in the lower animals. He thought it not improbable that the cilia were developed on the cells at the menstrual epoch, and afterwards disappeared until the next menstrual period.

7. *Strauch on the Human Sternum*.—Measurements made by this observer (*Inaug. Dissert.*, Dorpat, 1881) give the following results. 1. The male sternum is in general longer than the female. 2. The length of the male sternum varies in 60 per cent. of the cases from 8 inches to 9.2 inches; that of the female, in 66 per cent. of the cases, from 7.4 inches to 8.4 inches. The average difference in length between the male and female sternum is about four-fifths of an inch. 3. This difference depends mainly on the length of the gladiolus; the manubrium and ensiform cartilage being nearly equal in male and female. 4. The manubrium is to the gladiolus in length as 1:2.6 in males, and as 1:1.4 in females, giving the female sternum, therefore, a shorter and plumper look than the male sternum.

8. *Maier on the Ganglia in the Uriniferous System of Man and some Animals*.—Professor Maier finds (*Virchow's Archiv*, Band lxxxv, pp. 49-70) in all parts beyond the kidney of the uriniferous system of man and some other mammals, uninterrupted nervous expansions lying in the mucous and muscular coats. These expansions do not form a close network, but rather frequent anastomoses uniting the superficial and deeper parts, and everywhere provided with ganglia. These ganglia he finds to have a very various relation to the nerves, some lateral, covered only by perineurium; others in the centre of nerve-bundles, or at a bifurcation. The cells are unipolar, bipolar, some apparently apolar. The nerve-fibres with which they are connected are mainly of the pale variety.

JAMES ANDERSON, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BARNES, ROBERT.—Antiseptic Midwifery and Septicæmia in Childhood. (*American Jour. of Obstetrics*, Jan. 1882.)
2. EMMET.—Notes of one hundred and thirteen Cases of Operation for Laceration of the Cervix Uteri. (*Ibid.*)
3. HEGAR.—On Capillary Drainage of the Abdominal Cavity. (*Centralbl. für Gynäk.*, den 18 Feb. 1882.)
4. HUNTER, J. B.—The Surgical Aspects of Gynæcology. (*The New York Med. Jour. and Obstetric Review*, Feb. 1882.)
5. MILSOM, C.—Clinical Studies on Uterine Involution. (*Thèse de Paris*, 1881.)
6. NEGRI, P.—Some Considerations on Labour in Face-Presentations. (*Annali di Ostet., Ginecol., e Pediatria*, Gennaio, 1882.)
7. OLIVIER, AD.—The Employment of Ignipuncture in the Treatment of Parenchymatous Chronic Metritis. (*Ann. de Gynéc.*, Feb. 1882.)
8. PALADINO.—Anatomy of the Ovaries. (*Giornale Internaz. delle Scienze Med.*, anno iii.)
9. PERUZZI, D.—A Successful Case of Double Ovariectomy. (*Raccogliore Med.*, 1881.)
10. PILAT.—Dystocia from Membranous Occlusion of the Vagina. (*Ann. de Gynéc.*, Feb. 1882.)
11. SCHWARZ.—Experiments on the Working of Liquor Ferri Sesquichlorati, Tincture of Iodine, and Strong Solution of Nitrate of Silver, in Direct Application to the Abdominal Cavity. (*Centralbl. für Gynäk.*, Feb. 11, 1882.)
12. TAYLOR, J. E.—Lupus of the Vulva. (*American Gynecol. Soc.*, 1881.)
13. WIEDOW.—Castration in Uterine Fibroma. (*Centralbl. für Gynäk.*, Feb. 11, 1882.)
14. QUEIREL.—Hydorrhœa during Pregnancy. (*Mar-seille Méd.*)
15. WEBER.—The Influence of the Bath-Cure of Staraja Russa on Fibromata of the Uterus. (*St. Petersburger Med. Woch.*, Nov. 5, 1881.)

1. *Barnes on Antiseptic Midwifery*.—Dr. Barnes states that antiseptic treatment should be begun early. Indeed, with the conduct of labour, the first great point is to secure firm contraction of the uterus. The pad and binder are useful. The compression exerted upon the abdomen and pelvis not only tends to promote uterine contraction, but it counteracts the aspiration or suction-force which tends to draw air, one of the factors of decomposition, into the uterus. It opposes centripetal osmosis. The day after labour, it is useful to give an aperient. It commonly happens that in the effort of defecation the uterus, compressed and sharing in the diastaltic action, expels a clot. It then contracts more effectually. The maintenance of contraction is efficiently aided by the action of oxytocics. Dr. Barnes always gives after every labour a mixture of quinine, ergot, and digitalis, three times daily, continued for two or three weeks. The effect in contracting the uterus is remarkable. It is shutting the gate in the face of the enemy. The next thing is to wash out the uterus. Plain tepid water may serve the purpose, but a solution of carbolic acid, 1 in 50, is better. This should be done once or twice a day from the second day. On the first day, there is little risk of absorption. Should there be the slightest rise of temperature and pulse, this intra-uterine injection is imperative. We ought not to refer to intra-uterine injections without reference to Harvey the Immortal, who thus cured a lady in imminent danger of septicæmia. Carbolic solution should be kept in the room. The catheter should be kept in it. If sponges are used they should be kept in the solution. It is probable that sulphurous acid may be found even better than carbolic acid as an antiseptic. Dutrochet, in his investigations on osmosis, found that the slightest trace of sulphurous acid stopped osmosis. It may be used in the proportion of 1 in 40. Whilst taking care to exclude foul stuff from the genital canal, we must be careful to exclude foul air from the lungs and skin. When the sun shines, open the windows. At night, especially, a fire is often the condition of good ventilation. It is of the utmost importance to guard against chill or any check upon the due action of the skin, lungs, kidneys, and intestinal canal; that is, maintain in due working order the excretory organs. Dr. Goodell has insisted upon the drainage of the uterus as a means of getting rid of noxious stuff. The principle is admirable. There is no doubt that, in the ordinary recumbent posture, blood and discharges are apt to collect in the lax uterus and vagina. Dr. Goodell recommends that the patient should at times be raised into the sitting posture to allow the fluid to drain off. Where a woman is strong, and after a few days, this plan may perhaps be adopted without disadvantage; but in the weakly subjects most prone to septicæmia, especially after hæmorrhage, sitting up has been followed by syncope and sudden death. If firm pressure be maintained upon the hypogastrium, and antiseptic irrigations be duly observed, drainage is secured. At the same time, if the bed be properly made, so that the head and shoulders are kept at a slightly higher level than the pelvis, drainage will be fairly accomplished. The dorsal decubitus is more favourable to drainage than the lateral. An effective barrier against the ingestion of noxious stuff from the parturient canal, is to supply the system with healthy nutriment by the stomach. The more the system is supplied in this way, the less will it absorb from vicious sources. Dr. Oldham was one of the first to lead the revolt against the old fashion of starving

on gruel during the first week; but it is easy to err in reaction. During the first two days, the system craves rest as well as food. Food that is not easily assimilable is apt to load the stomach, lying undigested or badly digested. As regards antiseptic midwifery in lying-in hospitals, the dangers gather round the patients in an accelerating ratio. If the history of many lying-in hospitals could be fairly written, we should have a terrible record of lives sacrificed to ignorance, to reckless disregard of medical authority, to architectural folly, to maladministration, to scandalous experimentation of fanciful crotchets. Uninformed benevolence, overriding the practical benevolence of science, has always been prolific of disaster. Nowhere can it count more victims than in lying-in hospitals. The first imperative condition for the safety of women in lying-in hospitals is the absolute single authority of the physician. The description given by Dr. Fancourt Barnes of the system in force at the British Lying-in Hospital is a practical illustration of the rules necessary to secure safety. Every patient is delivered under the carbolic spray. This disinfects nurses and pupils who are assisting, and prevents the entrance of germs or foul matter into the genital tract, at the moment when it is distended and opened by the passage of the child. All washings, syringings, and examinations, are done with carbolic solution. Carbolic spray of 1 in 80 is almost continuously playing in each ward. To secure contraction of the uterus, each patient has a mixture of quinine, ergot, and opium, three times a day, for the first week. Since instituting the above practice, he rarely finds any rise of temperature during the lying-in. We may thus hope to see the day when women can be delivered in lying-in hospitals as safely as in home practice.

2. *Emmet on Laceration of the Cervix Uteri.*—Dr. Emmet has had one hundred and thirteen cases of operation for laceration of the cervix without a death. Of these, ninety-nine were bilateral lacerations, three were on the right side alone, eight were on the left, and three were markedly stellate, involving three sides or more. The reason why these operations show such preponderance of bilateral laceration is simply this. In Dr. Emmet's experience, when one side alone is torn, the sound side acts so like a splint that the lips of the fissure are not liable to spread apart, and cause ectropion to a pathological degree. They, therefore, as a rule, do not need an operation. Of these cases, union wholly failed in two. In four, the union was partial; but in two of these, a suspicious-looking cervical growth had been previously removed. The number of cases in which the forceps had been used was not noted. He generally found that, when the rent was an unusually bad one, the perinæum was torn also, and that the labours had been instrumental. In six of these cases, both perinæum and cervix had to be operated on. In three of these, both lesions were operated on at one sitting. All were successful. Of the one hundred and thirteen cases, thirty-five were performed in the amphitheatre or the private operating-rooms of the hospital of the University of Pennsylvania, which is a general hospital. Of these, two had serious attacks of perimetritis and of parametritis, and two had slighter attacks, all due to hospitalism. They recovered, but in one the convalescence was delayed by the formation of two abscesses in the leg. In this case, the patient next to her broke out with erysipelas on the day of the operation. In the other bad case, an explosion of

erysipelas took place on her face and trunk. Strange as it may seem, the union in all these cases was perfect. Dr. Emmet attributes this success to the fact that the stitches were not removed on the outbreak of the pelvic inflammation, but were allowed to remain a much longer time than usual. As the carbolic spray obscures vision in such operations, it is not resorted to, the only antiseptic means employed being a 2.5 per cent. solution of carbolic acid for the sponges. Vaginal injections of the same solution are repeated twice a day, until the stitches are removed. The same means were used in his private cases, and of these he had but two with any symptoms of inflammation. The attack was in each case mild and manageable, giving no anxiety whatever. Some who had remained sterile after the laceration speedily became pregnant again after the operation. Dr. Emmet is of opinion that the cervix should always be restored, whenever ectropion of the mucous membrane takes place and the glands of Naboth become enlarged.

5. *Milsom on Uterine Involution.*—Whilst *interne* at the Lyons Hospital, Dr. Milsom measured a large number of uteri from the day of delivery. He is of opinion that observation of the progressive diminution of the volume of the uterus is the only clinical method of following the course of involution. The old modes of measurement only give uncertain results. Abdominal palpation, as it only gives the height of the fundus above the pubic plane, and not above the superior strait, can yield useful results only on condition that the height of the uterus is noted in its relation to the transverse planes of the pelvis, and should be combined with the mensuration of the uterine cavity. The only exact means at our disposition for measuring at any given moment the volume of the uterus is the graduated hysterometer. In the appreciation, however, of the total volume, account must be taken of the thickness of the uterine walls, which varies during involution. Uterine catheterism should only be employed with reserve and prudence, and with strict antiseptic precautions. In these conditions, it presents no dangers, and may be practised from the fourth day, or even sooner, after delivery. The uterus is $13\frac{1}{2}$ centimètres above the pubic plane twelve hours after labour. On the eleventh day, it is $5\frac{1}{2}$ centimètres above the pubic plane. On the fourth day, the uterine cavity measures 14 centimètres; on the eleventh day, 10 centimètres. The daily diminution is 0.75 centimètre, but during the first three days the involution is more rapid than at a later period. The exact knowledge of the normal volume of the uterus on different days after labour might be of great value in medical jurisprudence. In this way the date of a labour might be fixed. Involution, as studied by catheterism, is slower in the cervix than in the body of the uterus. The cervical cavity measures 8 centimètres on the fourth day, and $6\frac{1}{2}$ centimètres on the eleventh day. Whilst the uterus is undergoing involution, it does not preserve any fixed relation to the transverse planes of the pelvis. It suddenly goes down $1\frac{1}{2}$ centimètres from the third to the fourth day, and nearly 2 centimètres from the fourth to the fifth day. Lastly, towards the ninth day it slightly rises. Involution is retarded by suckling. The uterine cavity on the eleventh day measures 10 centimètres in mothers who are suckling, whilst in those who have not suckled, it only measures 9.5 centimètres. Involution is a little quicker in multiparæ than in primiparæ. The rapidity of involution is most pro-

nounced in multiparæ who have not suckled. The length of labour has no influence on the progress of labour. Only after a tedious labour, the uterus remains larger during the first twenty-four hours. In labour at the seventh or eighth month, uterine involution presents the same phenomena that it does at term. The duration of the period of involution is very variable. From several catheterisations practised at a distant epoch from labour, Dr. Milsom concludes that it may last from eight to nine weeks in women who have not suckled, and that it may continue during ten or twelve weeks, and even more, in women who are suckling.

7. *Olivier on Ignipuncture in Chronic Parenchymatous Metritis.*—Dr. Olivier makes a variable number of punctures with the thermo-cautery into the cervix uteri, parallel with the axis of the uterine canal. The cautery is never pushed in to a less distance than 5 millimètres, and never more than 3 centimètres. The deeper the puncture, the more marked is the effect in producing contraction of the hypertrophy. FANCOURT BARNES, M.D.

14. *Queirel on Hydrorrhœa during Pregnancy.*—M. Queirel has published in the *Marseille Méd.* an interesting memoir, in which he studies the various elements of the still debated question of the nature of the watery discharges frequently occurring during pregnancy, and spoken of under the generic name of hydrorrhœa. He relates first two cases. In one, a multipara, six months advanced in pregnancy, there had been two effusions of colourless fluid. He was called after the third, which occurred during the night without conscious pain. From the odour, the marks on the linen, and the abundance of the loss, he had no doubt that this was a flow of amniotic fluid, although there was no commencing miscarriage. With prolonged repose and laudanum injections, the patient went on satisfactorily to full time, and was delivered of a healthy child. In the second case, a similar loss occurred at the fourth month, accompanied by abdominal pain and uterine colic. Rest and laudanum injections relieved the pain and arrested the loss. Similar phenomena reappeared and disappeared at the end of five weeks, but fifteen days afterwards the discharge recurred and was followed by abortion. The fœtus was six months old and well developed. M. Queirel points out that cases are reported under the name of hydrorrhœa which are of certainly different natures, and include the flow of fluids of a very different aspect, nature, and origin from amniotic fluid. In some cases, there is a rupture of the membranes from injury or severe contraction, chiefly occurring during the night. This form of rupture is usually followed by labour from six to nine weeks afterwards. The discharge in these cases should be called hydramniorrhœa. When the liquid which escapes presents somewhat of the character of the amniotic fluid and the flow is reproduced at regular intervals, and the pregnancy continues its regular course, the case is probably one of true hydrorrhœa; that is to say, a flow of serous fluid secreted by the maternal vessels and the external surface of the ovum. This is the theory of Naegelé. Exceptionally, the possibility may be admitted of a fluid furnished by an accidental cyst, by a twin ovum of which the product has been dissolved, or by the uterine glands of the cervix, true catarrh of the cervix. Finally, cases may be diagnosed which may be confounded with these, and are not the least important; that is to say, cases of incontinence of urine, or of vesico-vaginal fistula, and cases in which the fluid may come from the

vulvar glands. The mistake of confounding the flow with escape of urine has, especially, often been committed. The following case observed by Magail deserves to be related as an example. A woman, in her first pregnancy, several times had watery discharges; she was, however, delivered at full term of a living child, and the hydrorrhœa continued after pregnancy. In the second pregnancy, the flow did not cease, and it was verified by several physicians whom she consulted. M. Depaul himself treated her for chronic affection of the uterus, and discovered only after several weeks of treatment that the fluid was furnished by the bladder. There was not, however, any vesico-vaginal fistula, but the anterior wall of the vagina was relaxed and ruptured on the middle of the vulva. There was a vaginal cystocele, with depression of the uterus. M. Magail relieved the infirmity by raising the uterus with the aid of tampons immersed in astringent fluid.

15. *Weber on the Influence of the Bath-Cure at Staraja Russa on Fibromata of the Uterus.*—Dr. F. Weber (*St. Petersburger Med. Woch.*, Nov. 5, 1881) says that, during the bath season of 1881, sixteen cases of fibro-myoma of the uterus were treated at Staraja Russa. The ages of the patients varied from 25 to 58 years—that of the greatest number was between 40 and 50. The duration of the ailments before the bath-cure varied from one and a half to thirty years. Of these only one, that of one and a half years, could be counted recent; four had suffered from twenty to thirty years; the remaining eleven cases were of five to twenty years' standing. The size of the tumours was also very various. In two instances they only reached the size of a hen's, and in four of a goose's egg; but in ten cases the tumour was much larger. In nine cases, there was only one tumour to be made out. In seven cases, again, the uterus had several fibromata. In one case only a peritoneal fibrous tumour was recognised; in ten cases the tumours were interstitial, and in four cases they were of both sorts. The influence of the bath-treatment on the volume of the tumours was not uniform, for in nine cases a diminution of bulk was distinctly recognisable, while in seven cases the volume was not diminished. No increase of the bulk of the fibroma was observed, but the size of the tumour varied with reference to menstruation, increasing in a marked degree before the period, and reaching its smallest size in the middle time between two periods. Cases of cavernous fibroma were much more liable to vary in bulk than those whose texture was firmer. In multiple fibromata, their different length of standing seemed to make them vary much in the same uterus. This increase and loss of bulk made it difficult to be sure whether such changes were permanent or only temporary. In some cases, the fibroma was complicated with perimetritic deposits and parametritic infiltrations, so that the diminution of the tumour must be, in these cases, ascribed to their absorption. Indeed, it is difficult to suppose that tumours of ten to thirty years' standing can be materially altered by a treatment of one to two months only. There are exceptions to this in cases complicated with pregnancy, in which, after delivery with involution of the uterus, marked diminution has taken place. In a case of that kind, sent to Staraja Russa, there was a most marked diminution of size after six salt, seven mud and twenty-seven mixed baths of salt and pine-extract. In all the cases of fibroma, menorrhagia and uterine hæmorrhage occasionally occurred. The bath-cure operated on these symptoms dif-

ferently, according to the individuality of the patient; for, in eight cases, the menorrhagia was subdued; in two cases, again, there was exacerbation of it. Unexpected hæmorrhage occurred in five cases, in four of them just after the commencement of the mud-bath cure, and in one case after a fright. This season there were more hæmorrhages than last one. The hæmorrhages occurred chiefly in cases complicated with parametritis or perimetritis, which invited the more or less active use of the mud-baths. It is usual to commence, in ordinary uncomplicated fibromata of the uterus, with simple salt baths, and prolonged vaginal douches of the temperature of 86 deg. to 104 deg. To baths for nervous and anæmic patients, preparations of iron and of pine-extract were added; to those for persons of leucophlegmatic temperament, preparations of iodine. Usually, it is not advisable to proceed to mud-baths, as such concentrated baths are apt to induce hæmorrhage. When menorrhagia or metrorrhagia is coming on, hot salt-water douches of 110 deg. to 118 deg. operate as hæmostatics; the use of warm douches of 59 deg. to 101 deg., between the menstrual periods, served often to ward off menorrhagia. It is sometimes necessary during menorrhagia to replace the warm salt douches by plain hot-water ones, when the former are inclined to prove irritating, and, in some cases, indeed, to proceed to prolonged intra-uterine salt douches, if they be not contraindicated by any local conditions.—[It is interesting to observe the treatment of fibroma of the uterus in the centre of Russia, Staraja Russa being an analogue of Kreuznach.—*Rep.*]

J. MACPHERSON, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. KAULICH.—Therapeutic Observations on Typhoid Fever in Childhood. (*Jahr. für Kinderh.*, vol. xvii, part 1.)
2. VOTTELER.—On the Pulse and Temperature in Tubercular Meningitis of Children. (*Ibid.*)
3. KORMANN.—The History and Bibliography of Orthopædic Surgery to the year 1879. (*Ibid.*)
4. RUNGE.—'Navel-ill' in Children. (*Zeitschrift für Geburtshilfe und Gynäkol.*, vol. vi, part 1.)
5. CAMERER.—The Artificial Feeding of Children. (*Archiv für Kind.*, vol. ii, part 12.)
6. ALBRECHT.—Pilocarpin in Pertussis. (*Ibid.*)
7. PINSKER.—The Use of Salicylate of Soda in Childhood. (*Ibid.*)
8. GROSSMANN.—Ophthalmia Neonatorum and its Prevention. (*Brit. Med. Jour.*, Oct. 29, 1881.)
9. MARSH.—Remarks on Treatment of Spinal Caries in Childhood. (*Ibid.*, Nov. 12.)
10. BARLOW.—Hysterical Analgesia in Children. (*Ibid.*, Dec. 3.)
11. STOKES.—Excision of the Knee in Early Life. (*Ibid.*, Dec. 10.)
12. OWEN.—The Early Detection and Treatment of Disease of the Hip-Joint. (Paper read before the Harveian Society of London, Nov. 3, 1881.)
13. GOODHART.—The Rheumatic Diathesis in Childhood. (*Guy's Hospital Reports*, 1881.)
14. QUINN.—On Cholera Infantum. (*American Practitioner*, Oct. 1881.)
15. PARROT.—On Two Cases of Enormous Hypertrophy of the Tongue, associated with Idiocy. (*Gaz. Méd. de Paris*, Dec. 10 and 17.)

CLINICAL RECORDS OF CHILDREN'S DISEASES.

Case of Acute Traumatic Tetanus in a girl aged 10 years: Onset of symptoms 13 days after injury to heel: excision of 1¼ inch of short saphenous nerve: Recovery. Mr. Swinford Edwards. (*St. Bartholomew's Hospital Reports*, 1881.)

A Fatal Case of Hæmophilia in a Boy aged 13 months: vaccinated at six months old: shortly after an attack of varicella: severe and increasing hæmorrhage from nose and mouth, at frequent intervals, for a month, ending in death: father and uncle bleeders: no history of tuberculosis. Dr. Hertзка, Vienna. (*Archiv für Kind.*, Band xvi, parts 8 and 9.)

Vesical Calculus in a Girl aged 3 years: removed by Bigelow's operation: Recovery. Mr. F. S. Edwards, West London Hospital. (*Lancet*, Oct. 1.)

Three Cases of Unusual Deformity of Anus in Children under 7 months old. Mr. Morgan, Hospital for Children, Great Ormond Street. (*Ibid.*, Oct. 22.)

Hydatid Tumour of Liver in a Child aged 4½ years: Successfully Treated by Aspiration. Dr. Edge, Manchester Southern Hospital. (*Ibid.*, Oct. 29.)

Three cases of Simple Atrophy of Optic Nerves in Children of same family. Mr. Higgins, Guy's Hospital. (*Ibid.*, Nov. 19.)

Strangulated Inguinal Hernia: Boy, aged 5 months: Operation: Recovery. Mr. Wright, Children's Hospital, Pendlebury. (*Ibid.*, Dec. 10.)

Acute Periostitis from Injury: Pyæmia: Death. (*Ibid.*) Sarcomatous Tumours of the Cranial Bones: Child, aged 1 year. Mr. Treves, London Hospital. (*Ibid.*, Dec. 10.)

Two Fatal Cases of Tetanus Neonatorum; in Children aged 4 years and 7 days. Dr. E. Smith and Mr. Parker, East London Children's Hospital. (*Med. Times and Gaz.*, Nov. 26 and Dec. 3.)

Two Fatal Cases of Acute Endocarditis in Children 9 and 13 years. Dr. Ashby, Hospital for Children, Pendlebury. (*Ibid.*, Dec. 17.)

Subacute Bright's Disease in an Infant, 3 months old, from exposure to Cold: Recovery. Dr. J. M. Booth. (*Brit. Med. Jour.*, Oct. 15, 1881.)

Aphasia, with right-sided Convulsions and Paresis following a Blow on the Head, in a Child, aged 11 years: Recovery. Mr. C. Heath, University College Hospital. (*Ibid.*, Oct. 29.)

Necrosis of the Left Ischial Tuberosity: Girl, aged 7 years: Removal of sequestrum: Recovery. Mr. Rose, Royal Free Hospital. (*Ibid.*, Nov. 5.)

Removal of Os Calcis and Astragalus for Caries: aged 10 years. Mr. D. Fox, Manchester Southern Hospital. (*Ibid.*, Nov. 12.)

Hydrophobia: Boy, 5½ years: symptoms began a month after wound, which had been cauterised: Treated with tincture of cannabis Indica: Recovery. Mr. Ruxton. (*Ibid.*, Nov. 19.)

Scorbutic Spinal Hæmorrhage: Girl, aged 13 years: family history of consumption: Patient had suffered for some months with subacute pleuropneumonia, and for several weeks from recurring cutaneous ecchymoses: Spasms of lower limbs lasting some days: Marked aversion to vegetable diet: Treated successfully with lemon-juice and belladonna. Dr. P. Eade. (*Ibid.*)

Hydrophobia: Boy, aged 7 years: Symptoms began a month after wound, which had been cauterised: Treated with subcutaneous injections of morphia and atropia: Death. Mr. Savory, St. Bartholomew's Hospital. (*Ibid.*)

Fatal Case of Scarlet Fever from Hæmorrhage from the Throat: aged 4 years. Dr. Cattle. (*Ibid.*, Dec. 3.)

Excision of both Elbow-joints: Boy, aged 10 years. Mr. Clement Lucas, Guy's Hospital. (*Ibid.*)

Dermoid Ovarian Tumour in Child, aged 7 years: Ovariectomy: Recovery. Mr. K. Thornton, Samaritan Hospital. (*Ibid.*, Dec. 10.)

Multiple Exostosis in an Imbecile Boy, aged 10 years: on ribs, pelvis, clavicles, scapulæ, and bones of extremities. Dr. Shuttleworth. (*Ibid.*, Dec. 17.)

Case of Addison's Disease in a Boy, aged 8 years, with Tubercular Disease of Lungs, of both Kidneys, and of Right Suprarenal Capsule. Mr. Wright. (*Ibid.*, Dec. 31.)

Two Cases of Calculus Vesicæ in Girls, aged 5 and 8 years: Successfully treated by rapid dilatation of the urethra. Mr. R. W. Parker, East London Hospital for Children. (*Med. Press and Circular*, Nov. 30)

CASES AND SPECIMENS OF CHILDREN'S DISEASES EXHIBITED AT SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.—Nov. 1, Two Cases of Renal Tumours composed of striped muscle and sarcoma tissue, and reference to other cases: all fatal before age of 18 months. Mr. F. S. Eve and Dr. D. Williams.—Dec. 6, Case of Hæmophilia. Dr. W. Legg.—Dec. 20, Cirrhosis of Liver and Lung in Child, aged 13 years: no history of syphilis. Dr. Pye-Smith.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Oct. 25, Cases of Gangrenous Eruption connected with Vaccella and Vaccination. Mr. J. Hutchinson.—Nov. 8, Two Cases of Congenital Macrostoma, with Malformation of the Auricles and Auricular Appendages on the Cheeks. Mr. J. H. Morgan.

CLINICAL SOCIETY OF LONDON.—Nov. 11, Removal of Pebble, of the size of cherry-stone, from Right Bronchus by Tracheotomy, sixteen days after being swallowed: Recovery. Mr. C. Lucas.

OPHTHALMOLOGICAL SOCIETY OF GREAT BRITAIN.—July 6, Intra-ocular Tumour: death 6 years after enucleation of diseased eye: Girl, aged 6 years. Mr. Spencer Watson.—Dec. 8, Case of Optic Neuritis in Chorea. Dr. Gowers.

MEDICAL SOCIETY OF LONDON.—Nov. 14, Congenital Abscesses of both Eyes. Mr. Wordsworth.—Nov. 21, Congenital Luxation of both Knees and Double Club-Foot: four relatives born with talipes. Mr. H. F. Baker.—Nov. 28, Cranial Osteophytes in Congenital Syphilis. Dr. Crocker.

1. *Kaulich on Therapeutic Indications in Typhoid Fever in Childhood.*—The object of this communication is to show that in the majority of cases of typhoid fever in childhood the temperature is capable of being controlled by a systematic antipyretic treatment, under which at the same time the typhous symptoms for the most part disappear. Further, the early administration of nourishment is of no disadvantage, but tends to counteract the febrile loss of weight, and also to diminish the period of convalescence. The specific treatment advocated by Dr. Kaulich consists in giving large doses of quinine, and the application of the cold pack. The children, who varied in age from four to ten years, were treated on the following uniform plan. In the evening of the first day of the more rapid rise of temperature, they were packed in cold wet sheets; and this was repeated several times, until a perceptible fall in temperature was observed. This was followed by a dose of about eight grains of quinine, given in the form of powder. Should the next morning's temperature have fallen, it is sufficient only to repeat the packing, and this with the quinine may be continued for the next four days, when the child is in a better condition to take nourishment. A fall in the evening temperature should lead to a smaller dose of quinine, which, however, in severe cases might reach 30 grains. Dr. Kaulich claims for this procedure a lower death-rate, and a diminished chance of complications.

2. *Votteler on the Pulse and Temperature in Tubercular Meningitis of Children.*—The very vexed question of the relation between pulse and temperature

in tubercular meningitis receives but scant attempt at answer in Dr. Votteler's paper, to which an article by Dr. Turin, noticed in this journal in August last, seems to have been the immediate incentive. The author bases his remarks upon the records of fourteen cases observed during life, together with the *post mortem* appearances, and appends a chart of the pulse and temperature curves, constructed upon two observations only *per diem*, some of them being remarkably deficient. Far from conclusively, these observations are regarded as showing that during the course of the disease there occurs a stage of variable duration, during which both pulse and temperature are depressed, subsequent to which both rise. This, however, can scarcely be regarded as novel. Dr. Votteler prefers to explain the depression and irregularity of the pulse as the result of pressure on the root of the vagus by the serous effusion into the ventricles, rather than by compression of the nerve-trunks by inflammatory exudation, since he has met with the disturbance of the pulse where no lymph existed. To the same cause also he considers the fall in temperature to be due; following in this respect the view advocated by Wood as to the production of fever. The pressure of the fluid in the fourth ventricle interfering with some centres which control both the production and the loss of heat, is considered as the more likely explanation of the temperature depression than the diminished oxydation consequent upon a diminished circulation. The acknowledged difficulty of constructing anything like a typical temperature-curve for this disease receives no attempt at solution in this paper.

4. *Runge on Navel-ill in Children.*—Hitherto the reports of cases of pyæmia which is known to occur in new-born infants, in connection with some affection of the navel, have been few and far between. Dr. Max Runge of Berlin has collected histories of forty-five cases, and the *post mortem* accounts of twenty-four. In every case there was inflammation of the umbilical arteries, the vein being healthy; and, in eight cases, this was the only morbid condition present. The author draws the following conclusions. Inflammation of the umbilical arteries is not in all cases a local disease tending to recovery; it may be of itself fatal, or may lead to death by pyæmia. He believes the process begins in the perivascular connective tissue of the remains of the umbilical cord, and then extends to the vessel, producing thrombosis. Death in no case occurred before the third day, and the majority of fatal cases occurred in prematurely born children. The diagnosis is exceedingly obscure, the disease in many cases not being suspected during life. Sometimes pus may be squeezed from the umbilicus, though this is not diagnostic, and the same may be said of jaundice. It was noticed that purulent ophthalmia was very prevalent when these cases of navel-disease occurred. The practical point seems to be that the portion of umbilical cord remaining attached to the infant should be kept as dry as possible, as thereby it becomes mummified without smell, and a powder composed of salicylic acid and starch is recommended as an application. Contact of the umbilicus or eyes of the infant with the maternal discharges should also be carefully avoided.

6. *Albrecht on Pilocarpine in Pertussis.*—Dr. Albrecht has found, from an experience of ten cases of whooping-cough in children between the ages of 1½ and 9 years, all of a marked scrofulous type, much benefit from muriate of pilocarpine given in small doses after every fit of coughing. To prevent

collapse, he advises that it should be given in a mixture containing a little brandy. Without claiming a specific character for the remedy, he asserts that it exercises a most beneficial influence during the most distressing period of the disease. After twenty-four hours of its administration, an obvious change for the better has taken place in the appearance of the mucous membrane of the throat, velum palati, and uvula, which become paler, less swollen, and moister; and laryngoscopic examination shows a similar improvement. The mucous secretion is less viscid, and the paroxysms of cough are less frequent and less severe, and, as a consequence, ulceration of the frænum linguæ does not occur. When the disease assumes the catarrhal character, the pilocarpine is given up, and cold compresses to the neck, with a drink of sweetened milk containing chlorate of potash, are used instead. As the whoop recurs, the pilocarpine may be again used.

7. *Pinsker on the Use of Salicylate of Soda in Children.*—Referring to salicylate of soda as an antipyretic, antizymotic, and antiseptic agent, it is chiefly of its use in the first named capacity that Dr. Pinsker writes. His conclusions are that this drug is a febrifuge which should be given in large doses, to be repeated with the increase of the pyrexia; that the immediate and remote ill effects, such as loss of appetite, nausea and vomiting, singing in the ears, giddiness, deafness, even the appearances of collapse at times, albuminuria, erythema, urticaria, and petechiæ, are oftenest seen when the drug is impure; that in such diseases as diphtheria, pertussis, and typhoid fever it exerts very little effect on the morbid process; and, for the last mentioned, the author prefers quinine, since the irritation and corrosion produced by the salicylate, especially when impure, may lead to perforation of the intestinal ulcers; and, lastly, that while useless in intermittent fevers, it is a specific in acute rheumatism. The author found in the course of experiments on himself that it was most rapidly excreted, it being detected in the urine by its deep violet colour, with sesquichloride of iron, an hour after ingestion.

8. *Grossmann on Ophthalmia Neonatorum.*—There can be no doubt, says Dr. Grossmann, at the present time, that the real and only cause of ophthalmia neonatorum, which produces 60 to 75 per cent. of the cases of blind asylums, is the infection from the secretion of the maternal passage during or shortly after birth. These secretions need not of necessity be purulent. Those apparently normal are almost equally infectious. The period of incubation after infection is three or four days; never less, often longer. Owing to the extremely serious results when once the disease has started, it is in prevention rather than in cure that most has to be done. The local treatment of the maternal passage, so that at the time of confinement there should be no infective matter present, has been tried with success. But far more satisfactory are the results that have followed the practice of disinfecting the eyes of all new-born children, without exception, with a 2 per cent. solution of carbolic acid; in those cases where a fluor albus existed, applying the treatment immediately after the birth of the head, even before the body was born completely. The eyelids, both outside and in the conjunctival surface, should be washed with the solution three times daily for the first two days of life; and should the mother have had a very strong vaginal catarrh, it is well to pad the child's eyes between the times of cleaning with a cotton-wool pad,

dipped in the same lotion and renewed every half hour.

9. *Marsh on the Treatment of Spinal Caries in Childhood.*—Mr. Howard Marsh considers that the time has now arrived when the relative merits of the two different methods of treatment of caries of the spine in childhood (viz., strict confinement to the horizontal posture, and the plaster-of-Paris jacket and jury-mast) may be compared. On *à priori* grounds, he is of opinion that the jacket does not possess the advantages that have been claimed for it. He denies its efficacy in removing the superincumbent weight from the spine at the point of disease, since in children under seven years old the circumference of the thorax exceeds that of the pelvis, and hence the latter cannot afford the jacket an efficient base on which to rest, while it transmits the weight of all the parts appended to the upper part of the spinal column. Remembering also the tendency of the column to fall forward when diseased, there is a greater demand for a firm *point d'appui* in front, and this the pubic symphysis is ill adapted to afford, and the anterior superior spines and crests of the ilia are no better. Besides showing that no thoroughly efficient base can be obtained for the support of the weight which the jacket is required to transmit, Mr. Marsh goes on to protest against the propriety of the accurate moulding of the jacket to the surface that Dr. Sayre describes, and even denies that it ever does so closely fit as we are told it ought to do. The object to be aimed at is to moderate the mutual pressure of the opposed surfaces, rather than to completely separate them. And if the support is to be adequate, it must act within the tenth of an inch; that is, if the jacket yield by so much as this, pressure at the seat of disease returns, and the instrument loses its effect. Such a degree of accuracy the apparatus does not permit. When the child that is fitted with a jacket moves about and stoops, it is the jacket and not the spine that is passive, the former being added to the weight which the latter is called upon to raise; and hence it is impossible to consider either the spine as at rest, or that intervertebral pressure is prevented by the use of the instrument. Mr. Marsh's practical experience at St. Bartholomew's and the Children's Hospitals bears out these views. Here and there, he has met with cases in which recovery with more or less deformity has ensued; but he believes they are instances where the disease shows a tendency towards spontaneous repair. But he cannot mention any instance in which, even when the jacket was applied in the early stage, the arrest of the disease and its final cure could be attributed to this method of treatment. The value of the jacket must not be altogether estimated by the relief of pain which doubtless it frequently affords; since it does so, not by complete removal of intervertebral pressure and keeping the spine at rest, but because it steadies the column, and restrains both sudden and extensive movements either forward or laterally. Owing to the constant liability of the straps to become loose, Mr. Marsh regards the jury-mast as practically useless. In default, therefore, he is forced to the conclusion that the best method at present known for the treatment of spinal caries is complete recumbency for from six to eighteen months, or even longer. He considers the failure of general health from confinement as having been greatly exaggerated, and that bed-sores should not occur with proper nursing.

10. *Barlow on Hysterical Analgesia in Children.*

—Dr. Barlow records eight cases, showing that absence or deficiency of response to stimuli, which in healthy people would be painful, is not confined to young women, but also occurs in children. The analgesia was general, though not uniformly distributed, and was more marked in the limbs than on the face. Six of the cases were girls, and the youngest of the series was two years and nine months, and the eldest eleven and a half years. In all, there were symptoms pointing to hysteria; and in most there were fits, which were never unilateral, and not positively attended with loss of consciousness. The author considers that they support the view, that in the hysterical neurosis there is a torpid condition of the sensory part of the brain, which in extreme cases may involve the centres of special sense, and in very slight cases may present only a blunting in the appreciation of ordinarily painful impressions. Dr. Barlow regards the existence of analgesia as a valuable aid to the diagnosis of hysteria, to be treated by well regulated exercise of mind and body.

11. *Stokes on Excision of the Knee in Early Life.*

—In reference to excision of the knee in early life, Professor Stokes lays down the following propositions.

1. The operation should not be looked upon as a last resource, but should be undertaken, if possible, before any profound organic changes take place.
2. Expectant treatment, to be efficient, must be undertaken at an early stage of the disease, and extend over a period of at least two years.
3. No better result than ankylosis can be looked for by this method.
4. In a patient with a predisposition to secondary tuberculous developments, the possibility of the recurrence of the disease after expectant treatment must be borne in mind.
5. In cases attended with prolonged suppuration, the chances of the occurrence of visceral, especially renal, disease must not be lost sight of.
6. Where the skin is unbroken, the disease limited, an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may, in the majority of cases, be anticipated.
7. When these latter conditions are fulfilled, excision of the knee-joint cannot be longer regarded as the formidable procedure it was formerly held to be.
8. The alleged unfavourable results of excision of the knee-joint in early life are opposed to more extended clinical experience.

12. *Owen on the Detection and Treatment of Diseases of the Hip-joint.*—Two points in respect to morbus coxæ are most emphatically insisted on by Mr. Owen, viz., the necessity of immediate recognition of the condition of an affected joint, since it is in the earliest days that treatment is most effectual; and, secondly, that this treatment should primarily consist of the most absolute rest. He strongly condemns the indifference often displayed by surgeons in the early days of the disease, when prompt and determined treatment is necessary. That many children who are allowed to run or hop about recover, he regards as due to their excellent reparative powers, in spite of their unfavourable condition; but while many do recover, others, less favoured, who are by no means scrofulous, become the subjects of rapidly advancing joint-disease. The points on which he lays most stress in detecting the affection, are not the existence of pain and stiffness in the hip or knee, nor the limping gait, nor even the pain elicited by striking the heel or great trochanter, since these signs are insufficient to distinguish the malady in question from others. He looks rather to the obliteration of the fold of the groin caused by the

distension of the capsule, and the flexion of the thigh on the abdomen, whereby the tension of the joint and the pain are diminished. Any attempt to straighten the limb is effectually prevented by forcible contractions of every muscle towards the front of the joint. The appearance of extension that does follow steady manipulation is not real, and is the result of a tilting forward of the pelvis and an arching of the loins, the relative position of the os innominatum and the femur being never once altered. Mr. Owen considers that, when the child is lying supine, the amount of the deformity may be estimated by the extent of arching of the loin, the lordosis being the mechanical compensation for the ilio-femoral trouble. Though sometimes associated with psoas abscess, this sign is of especial value in the diagnosis of hip-disease, which may be further supported by pressure over the front of the joint, or rotation of the thigh outwards, by which means the intra-articular pressure is increased, and signs of pain elicited. The most valuable signs noticed posteriorly are a greater width of buttock on the affected side, an intolerance to the pressure of the finger in the interval between the ischial tuberosity and the great trochanter, and a change in the arrangement of the gluteal folds. For treatment, perfect rest, with a Thomas's splint, may be sufficient; or extension by weight and pulley, traction being carefully kept in the axis of the femur, and the recumbent posture rigorously maintained, may be previously carried out. The author is opposed to counter-irritants in the earliest stages, but considers the application of two or three leeches over the acutely inflamed joint very judicious.

13. *Goodhart on the Rheumatic Diathesis in Childhood.*—Dr. Goodhart's paper, in the *Guy's Hospital Reports* for 1881, is a valuable contribution of a statistical character to our knowledge of the rheumatic diathesis. His results are founded upon a large number of cases observed by himself both at Guy's and the Evelina Hospitals; and he has taken care to exclude all references to mere vague rheumatic pains, and has only accepted definite rheumatic complaints. The conditions that he finds associated with a rheumatic strain are acute rheumatism, heart-disease, chorea, headache, night-terrors, nocturnal incontinence of urine, and other neuro-muscular derangements. That is to say, a large proportion of children suffering from these maladies have definite histories of rheumatic antecedents of some sort.

The proportion, as regards acute rheumatism, heart-disease, and chorea, amounts in Dr. Goodhart's cases to two-thirds. His inquiries tend to show 'that parents who have had rheumatic fever transmit to their offspring a something, a constitution which tends to show itself in various ways, sometimes by acute rheumatism, sometimes by the slow production of endocardial thickening and valvular disease, sometimes by bad headaches, sometimes by obstinate anæmia, sometimes by irregularities of muscular action, such as chorea, occasionally by epilepsy, by abdominal convulsions, or, perhaps, it may be as well to adopt Charcot's term as a general one, and call all such *crises gastriques*; sometimes by a more general but persistent low tone of nervous system, such as may happen temporarily to anyone when below par, but is then speedily recovered from.' Further, the author is led to see indications for ascribing a neurotic origin for rheumatism, as has been supposed for gout, and scarcely less probably for osteo-arthritis. These three diseases, doubtless 'distinct in the individual, are very possibly modifi-

cations or varieties of some common ancestral, less specialised type, which, in the process of evolution, either of the disease or the family, has given rise to all.

16. *Parrot on Two Cases of Enormous Hypertrophy of the Tongue associated with Idiocy.*—The disease, which is the subject of a clinical lecture by Professor Parrot, and to which the names *megalglossia*, *glossoptosis*, and *glossomégalie* have been applied, is of extreme rarity, only two cases having fallen under the author's notice. Of these, one died at 4½ years, a *post mortem* examination being made; the other, aged 2 years, was still under observation. From them, the following description of the malady may be given. The most prominent feature is the prolapse of the tongue, which is enormously enlarged in every direction, of a deep violet colour, and covered with a thick whitish coating, with the veins of the frænum much developed. Swelling of the tongue may be due to different causes, such as glossitis, certain poisons, such as mercury, or the stings of insects; but neither these, nor the temporary congestion which may occur from convulsions or whooping-cough, produce the condition under consideration, which is to be regarded as a congenital malformation, which increases after birth. The protruded organ becomes indented and even ulcerated by the teeth, which themselves are gradually pushed forwards, laid bare, and become carious. The jaw undergoes a species of atrophy, the saliva continuously flows from the mouth, the lower lip becomes thickened and ulcerated, and the dragging forward of the larynx and velum palati by the weight of the tongue renders suction, mastication, and deglutition, difficult, thereby interfering with the general nutrition. Whilst some regard the morbid condition as due to hypertrophy of the lingual muscles, others, as Virchow and Billroth, explain it as the effect of an over-development of the lymphatics. This deformity seems to be specially associated with certain other bodily disproportions; thus the trunk is much longer and larger relatively to the limbs than normal, and these are short and thick-set, the legs appearing bowed from the enormous muscular development on the hinder and outer sides. The hands and feet are large, thick, and purple. Notwithstanding the muscular development, the two-year-old child could not walk, had no teeth, was markedly prognathous, with the physiognomy of an idiot; it had an unclosed fontanelle, a cardiac murmur, and an umbilical hernia. Even the elder child, though possessing all the temporary teeth except the lower canines, resembled the other in being unable to walk, and in presenting a similar murmur and hernia. The *post mortem* examination of the latter showed the entire brain to weigh only 755 grammes (26.5 ounces), the normal weight at that age being 1,190 grammes (42 ounces). No naked eye lesions were noticeable in the brain or spinal cord. The heart weighed 55 grammes (1¾ ounces), and was remarkable for its conical form and for the predominance in size of the left ventricle; the aortic orifice was narrowed by thickened and rigid valves, while the vessel itself was atheromatous; the pulmonary cusps were also thickened. The tongue weighed 46 grammes; the kidneys were healthy; and the muscles of normal appearance. One of the most striking features of the disease is the coincidence of arrest in the development of the brain; and M. Brisson has met with the deformity in anencephalous monsters. Cretins, also, whose cerebral deficiency is undoubted, are characterised by a

thick pendant lower lip, large swollen tongue, big lower jaw which, extending beyond the upper, gives a bestial expression, whilst their teeth are wide apart and carious, the permanent ones seldom replacing the milk-set. Whether one and the same cause have brought about the cerebral atrophy and lingual hypertrophy, or whether the tongue has grown at the expense of the deficient brain, and to what extent the imperfectly developed heart may lead to this condition, are questions still unanswered.

W. H. ALLCHIN, M.B.

SYPHILOGRAPHY.

RECENT PAPERS.

1. MARTINEAU.—On Subcutaneous Injection of Mercurialised and Ammoniated Peptone in Syphilis. (*L'Union Méd.*, Nos. 99 et seq., 1881.)
2. PARROT.—Syphilitic Affections of the Teeth in Inherited Syphilis. (*Gaz. des Hôp.*, No. 78, 1881.)
3. RECLUS.—On Suppurating Gumma of the Testis. (*Gaz. Hebdom.*, No. 36, 1881.)
4. FINGER.—On the Constant Occurrence of Nervous Disturbance during the Exanthem Period of Secondary Syphilis. (*Viertelj. für Derm. und Syphilis*, Heft 2 und 3, 1881.)
5. CHVOSTEK.—On Syphilitic Disease of the Liver. (*Ibid.*)
6. MANSURROW.—On Syphilis of the Fibrous Tissues and Sheaths of Tendons. (*Ibid.*)
7. KASSOWITZ.—Syphilis and Rickets. (*Wiener Med. Blätter*, No. 40 et seq., 1881.)
8. BULL.—Lesions of the Orbital Walls and Contents due to Syphilis. (*New York Med. Gaz.*, Nov. 5, 1881.)
9. ROBINSON.—Bromine Topically in Chancroids and Chronic Ulcers. (*Ibid.*, p. 423.)
10. BAUMGARTEN.—On Syphilitic Gummatous Disease of the Brain and Spinal Cord, especially of the Cerebral Vessels, and its Relation to the Corresponding Tubercular Affections. (*Virchow's Archiv*, Nov. 1881, p. 179.)
11. THOMANN.—On the Subcutaneous Injection of Iodoform in Syphilis. (*Centralbl. für die Med. Wiss.*, No. 44, 1881.)
12. MARTINEAU.—The Propagation and Prevention of Syphilis. (*L'Union Méd.*, Nos. 48, et seq., 1881.)
13. PETERSEN.—The Treatment of Suppurating Buboec. (*St. Petersburg Med. Woch.*, No. 52, 1881.)
14. HILL.—On a case of Linear Rectotomy for Syphilitic Stricture of the Rectum. (*Brit. Med. Jour.*, Dec. 24, 1881.)
15. NEUMANN.—A case of Soft Chancre in the Rectum. (*Allgem. Wien. Med. Zeitung*, No. 49, 1881.)
16. BROADBENT.—Syphilitic Pachymeningitis of the Cerebellar Fossa. (*Lancet*, Feb. 4, 1882.)

4. *Finger on the Constant Occurrence of Nervous Disturbance during the Exanthem Period of Secondary Syphilis.*—In this paper (*Vierteljahr. für Derm. und Syphilis*, 2 und 3 Heft, 1881), Dr. E. Finger gives an account of certain experiments made on syphilitic subjects in Zeissl's wards with regard to the skin and tendon-reflex activity during the early secondary period. The author experimented altogether on fifty patients; thirty-seven of these (twenty-eight males and nine females) came under observation between three and six weeks after contagion. The remaining thirteen (nine males and four females) were admitted shortly before the appearance of the general exanthem, or with the eruption already present. The patients were examined daily, or every second or third day, during varying periods, of which the length is not exactly stated, but which usually did not extend beyond the fading of the eruption as

the patients usually left the hospital at that time. The chief points to which attention was paid were the reflex irritability of the abdominal wall, the cremaster-reflex, and the plantar-reflex, as well as the knee, ankle, and elbow-phenomena. In order to arrive at some sort of standard of comparison, the author began by testing a number of non-syphilitic and comparatively healthy patients, until by practice he considered he was able to exercise a fairly uniform degree of force, and to roughly group the amount of reflex irritation thus produced under six heads. Thus, the numeral 'o' was made to represent absence of reflex movement, while '5' indicated the maximum, the intermediate grades being classed under one or other of the intervening numbers, according to their intensity. Twenty of the cases examined are tabulated according to this scheme, which Dr. Finger acknowledges to be a rough and imperfect one; but he thinks the general results worthy of record, because of their comparative uniformity. Thus, in all the cases there was an increase, sometimes very marked, both of the skin and tendon-reflex irritability immediately before and at the time of appearance of the first exanthem. This was soon followed by decreased irritability, often to an extent much below the normal state; while in some cases reflex phenomena were temporarily absent altogether. After this, the normal condition was again reached very gradually, generally, indeed, only several weeks after the fading of the rash. From this general rule, however, there were many departures. In women, for example, the fluctuations were seldom so well marked or so typical as in men. In those cases, again, in which the eruption did not come out generally within a few days, but appeared irregularly in crops, the reflex irritability was modified, in that the irritability of the various regions differed in degree at a given time, the reflex activity being increased in one region, and perhaps decreased, or even absent, in others. When a recurrence of the rash took place some time after the general outbreak, each recurrence was ushered in by a rapid increase of reflex irritability, which as quickly declined again when the eruption had fully developed. The increased irritability was only partial in many cases, and connected with the region in which the eruption recurred. For example, a crop of papules on the scrotum was attended by increased cremaster-reflex only, and a case of plantar psoriasis by exaggerated plantar reflex. Specific treatment did not appear to modify the course of events materially as regards reflex irritability. The movements excited were usually equal on both sides of the body, and in the tables the two sides are included under one heading. In some cases, however, a marked difference was found. Thus, in a case of psoriasis plantaris of the right foot, exaggerated cremaster-reflex, knee, and ankle phenomena were present only on the corresponding side of the body, and subsided after the eruption had faded. About a week later, the left sole became affected by the eruption, which was similarly accompanied by increased reflex irritability on the left side of the body.

5. *Chvostek on Syphilitic Disease of the Liver.*—In a long communication to the *Vierteljahr. für Derm. und Syphil.*, 2 und 3 Heft, 1881, Dr. Chvostek of Vienna gives an account of the whole subject of syphilis of the liver, illustrating his paper with particulars of nineteen cases observed by himself in hospital practice. Twelve of the cases, all males, are given in detail; three are only briefly reported, and the remaining four have already been published

in other journals. The period of the disease at which the visceral affection occurred was not ascertained in 8 cases; but the interval after the primary sore was 2 years in 2 cases; 4 years in one case; 9 years in 2 cases; 14 years in 2; and 15, 21, 24, and 40 years respectively in the remaining 4 cases. Two of the patients were between 21 and 30 years of age; 6 between 31 and 40; 6 between 41 and 50; 3 between 51 and 60; and 2 between 61 and 70. The result was fatal in 16. One patient improved considerably under treatment, and two are reported as having recovered. *Pathological Anatomy.* Syphilis may affect the liver in three ways: 1. *Amyloid Degeneration*; 2. *Perihepatitis*, which usually leads to thickening of the capsule and adhesions to neighbouring parts. This is usually associated with syphilis of the substance of the organ, but in some rare cases precedes it, as the author thinks was the case in two of his nineteen examples. 3. *Syphilitic Hepatitis*. This is usually divided into a diffused form (diffused interstitial syphilitic inflammation) and a circumscribed form (gumma, or syphiloma of the liver). The diffused form is most common in syphilitic children who are stillborn or die soon after birth. Four of the cases showed this change. The circumscribed form is more frequent than the diffused. Gummata were found in two cases. In four cases, the liver was puckered, and its surface lobulated from cicatricial contraction following degeneration of the gummata. In two cases, the capsule of the liver was much thickened at the site of the contracted portions. In three cases, the portal vein was compressed at the transverse fissure, once by enlarged glands, once by cicatricial contraction, and in the third case, obstruction was due to both these causes combined. *Symptoms.* These are frequently so vague that the disease is overlooked or mistaken during life. In one case, hard knobs could be felt on the surface of the liver. In two cases, lobulation and shrinkage occurred while the patient was under observation. Ascites was present in twelve of the nineteen cases. In two, it was not connected with the hepatic disease; in three, it was partly due to compression of branches of the portal vein, and partly to Bright's disease; in four, it was due solely to compression of the portal branches; and in three to pressure on the main trunk of the vein at the transverse fissure. Of these last seven cases, paracentesis was required in five. In only three of the seven was the liver diminished in size; in three, it was considerably enlarged, and in one was of moderate size. Enlargement of the spleen was present in twelve cases. In five of these, it was due to syphilis alone; in five, to syphilitic disease and portal obstruction in consequence of the liver disease; in three, to obstruction of the circulation alone; and in one, to congestion following pneumonia and pericarditis. In one case, the spleen contained gummata. Jaundice occurred in nine of the cases. In three, the jaundice was very slight, and in one of these pneumonia was also present; in one, the skin was only slightly yellow, but the urine contained a considerable quantity of bile; in three others, the jaundice was slight, gall-stones being also present in one; in the remaining two instances, jaundice was well-marked, and in one was due to pressure on the bile-ducts by enlarged glands and thickening of the capsule, and in the other, to obstructed circulation connected with disease of the thoracic organs. *Course and Duration.* This was not known in nine cases. In seven, the duration was about 4½, 5, 6, 7, 9, 10, and 11 months respec-

tively; in two, about fifteen months; and in one about eighteen months. *Terminations.* One patient recovered under iodide of potassium. Paracentesis was performed eleven times in five months in this case, and the patient was still in good health fifteen years afterwards. Another case the author is doubtful whether or not to call one of recovery, but the patient almost regained his health under specific treatment. Tapping was twice necessary in this case. In a third case, again, marked improvement took place under treatment. Sixteen patients died, death being attributed to pneumonia in three; to pneumonia and pericarditis in one; to tubercular disease in one; to bronchiectasis in one; to retropharyngeal abscess and stricture of the trachea in one; to peritonitis in two; to Bright's disease in one; to diphtheria in one; to thrombosis of cerebral sinus and pachymeningitis in one; and to exhaustion in three cases, while one patient died suddenly of anæmia of the brain. *Complications* (due to syphilis). The *Spleen* (already mentioned). The *Kidneys* showed chronic Bright's disease in the stage of fatty degeneration in two cases, granular atrophy in two cases, fatty degeneration in one case. The *Bones* showed periostitis, ulceration, or cicatrices in four, exostosis of the olecranon in one, sclerosis of the cranium in one, probably syphiloma of the skull in one. The *Lungs* showed gumma of the right apex in one, chronic interstitial pneumonia in four, stenosis of the right bronchus in one; there were scars or ulcers of the larynx in three. The *Skin* showed scars or ulcers in four. The *Brain* showed an apoplectic attack with hemiplegia followed by recovery in one. Scars of the *Pancreas* and *Suprarenals* were found in one, and hydrocele in one. There was extension of perihepatitis to the peritoneum in one. Affections of the throat or nares were present in several cases.

6. *Manssurrow on Syphilis of the Fibrous Tissues and the Sheaths of Tendons.*—Dr. Manssurrow of Moscow remarks (*Viertelj. für Derm. und Syph.*, 2 and 3 Heft, 1881) that from five to ten per cent. of syphilitic subjects develop lesions of the fibrous tissues or tendinous sheaths, and that persons of lymphatic temperament are most liable to suffer in this way. The affection may occur early or late in the disease, but resolution occurs without softening, except in the rarest instances; thus differing from gummata of the cellular connective tissue, which are liable to break down. The author also describes at considerable length the anatomical characters of the growths, quoting Virchow and other well-known authors, and illustrates his paper with the reports of nine cases of syphilitic swellings in connection with the tendons or fibrous structures in various situations, including the hip, knee, elbow, and finger-joints. In one instance, the growth affected the sheath of the sterno-mastoid, and was large enough to press on the trachea, and thus interfere with the breathing. The period after infection at which the growths were noticed varied from three months to thirteen years, only one, however, being later than five years. In all except one case, resolution occurred under mercury or iodide of potassium, or both. In the exceptional case—one of gummata in the neighbourhood of the great trochanter, occurring thirteen years after contagion—softening and suppuration took place in spite of treatment.

8. *Bull on Syphilitic Lesions of the Orbital Walls.*—The following is a brief résumé of a paper read by Dr. Bull before the New York Academy of Medicine (*New York Med. Gaz.*, November 5th, 1881). Syphilitic lesions of the walls of the

orbit belong usually to the late stages of the disease; when they occur early, they are less severe. The usual seat of gummata is the frontal bone. The diagnosis is not always easy. Periostitis may be one of the earliest constitutional symptoms of syphilis. In adults, it tends to speedy resolution under proper treatment. In inherited syphilis, it is less amenable to treatment. Periostitis may be acute or chronic. The symptoms are pain, swelling, exophthalmos towards one side or downwards, redness of the eyelids, etc. The dangers are: loss of vision, optic neuritis, or simple atrophy of the optic nerve. Pain is very severe, and the attack may be ushered in by a chill. The symptoms of the chronic form are more obscure. These lesions are often accompanied by subperiosteal abscess, which usually opens through the conjunctiva or eyelid, but may open into the nose or cranial cavity. Extension to the meninges does not occur, but caries of the bone may follow, and sinuses may be left through which dead bone comes away. Of exostoses due to syphilis, the most marked symptom is exophthalmos. They are usually slow in growth, but may develop rapidly. They cause pain by pressure on nerves. Treatment should be constitutional, and careful examination made for other signs of syphilis.

9. *Robinson on the Application of Bromine to Chancroids and Chronic Ulcers.*—Dr. J. L. Robinson of Louisville states (*Ibid.*, p. 423) that he has found the daily application of a solution of bromine to chancroids and chronic ulcers associated with syphilis, of great benefit. His formula is bromine, one part; water, three parts; bromide of potassium sufficient to make a solution, which is applied by means of a mop made of cotton-wool.

11. *Thomann on Subcutaneous Injection of Iodoform in Syphilis.*—Dr. Thomann of Graz states (*Centralb. für Med. Wiss.*, No. 44, 1881) that he has treated several cases of early syphilis by injecting beneath the skin a solution of iodoform in glycerine (6 to 20). He began with a dose of 0.30 gr. (about $4\frac{1}{2}$ grains) of iodoform, and gradually increased it according to circumstances up to 0.75 gr. After ten or twelve injections in various parts of the body, marked diminution of the symptoms was noticed. In some cases, slight pain was felt for a few minutes after the injection, but it usually quickly disappeared. The puncture next day was only slightly red and tender. In no case was abscess caused. Iodine could be detected in the urine within two hours after the injection, but the odour was not perceptible either in the urine, breath or sweat. The use of the drug did not cause sleepiness nor disturbance of the pulse, temperature, or of the health generally. In some cases a solution of iodoform in oil of sweet almonds was tried, but the local reaction was more severe and lasted several days. The oil solution also had to be prepared immediately before injecting it, otherwise free iodine was quickly liberated.

13. *Petersen on the Treatment of Suppurating Bubo.*—Dr. O. Petersen discusses the various methods of treating buboes (*St. Petersb. Med. Woch.*, No. 52, 1881), and describes the plan now adopted by himself. He recommends that every inflamed bubo should be painted with iodoform-collodion and covered with a warm compress; and this, he states, is often successful in dispersing the swelling. If, however, suppuration take place, an incision is made, and the abscess-cavity scraped out with the sharp spoon, after which it is washed out with a 20 per cent. solution of carbolic acid. The wound is then covered with several layers of salicylic wool,

and over this a firm pad of tow covered with varnished paper. A bandage is then firmly and evenly applied, paste being also sometimes used to give greater firmness, so that the abscess-walls are kept in close and accurate apposition. In twenty cases treated by the author in this way, cure was usually obtained after one to three dressings, each being left undisturbed ten to fifteen days on an average. In one case, when the pressure had not been quite equable, a second small abscess had to be opened.

14. *Hill on Linear Rectotomy for Syphilitic Stricture of the Rectum.*—A married woman, aged 26, was admitted into University College Hospital, May 10, 1881 (*Brit. Med. Jour.* Dec. 24, 1881). The history pointed clearly to syphilitic contagion three years before. On examination, the margin of the anus was found to be indurated for about two inches, and close to the outlet there were some ulcerating nodules. The gut for about two inches above the anus was uneven, ulcerated and contracted. The stricture terminated at the upper end by a sharp edge resembling a band. On May 18, Mr. Berkeley Hill operated as follows. The patient having been brought under the influence of ether, Mr. Hill introduced one finger into the rectum; he then passed a large curved needle, threaded with silk, through the skin in the middle line just in front of the coccyx, and pushed it on between the sacrum and the rectum, until the point was above the indurated part. The point was then carried into the rectum, and the silk seized with forceps and drawn out through the stricture. The needle was then withdrawn, leaving the silk ligature in its track. A wire was then attached to the silk, and, after being pulled through, was attached to an *écraseur*. The included tissues were then divided with very slight bleeding. By June 3rd, the patient could pass for herself a No. 10 rectal bougie without pain. Her general condition was good, the ulcers had greatly improved; defæcation was easy, and there was complete control over the sphincter. On June 4th, the patient was discharged.

15. *Neumann on a Case of Soft Chancre in the Rectum.*—A woman, aged 26, presented herself at Professor Neumann's Clinic, complaining of severe pain on defecation, from which she had suffered for some days (*Allgem. Wien. Med. Zeitung*, No. 49, 1881). On examination, a sharply cut sore, having the characters of a soft chancre, was found on the posterior wall of the rectum, about four centimètres above the sphincter. The anus and the genital organs were healthy. Inoculation of the discharge of the rectal ulcer on the patient's arm produced two characteristic soft sores. The patient's husband was then examined, and was found to have a soft sore on the margin of the prepuce. He admitted that he might have infected his wife. Two chancres subsequently appeared among the anal folds in the case of the woman, presumably from secondary inoculation by the discharge from the rectal sore.

16. *Broadbent on Syphilitic Pachymeningitis of the Cerebellar Fossa.*—At a meeting of the Medical Society on January 30 (*Lancet*, Feb. 4, 1882) Dr. Broadbent described the *post mortem* appearances in a remarkable case of paralysis of the seventh, eighth, and ninth nerves; the patient having been brought before the Society on October 15 (see LONDON MEDICAL RECORD, Jan., p. 24). It was supposed that the lesion was a gumma, situated in the lateral portion of the medulla and pons Varolii. It turned out to be a case of syphilitic pachymeningitis of the right cerebellar fossa. When the tentorium

was divided, the right lobe of the cerebellum was found to be closely adherent to the dura mater, which was thickened, and thus caused compression of the nerves at their point of exit from the foramina. The medulla, the pons Varolii, and the brain itself were quite healthy. ARTHUR COOPER.

TOXICOLOGY.

RECENT PAPERS.

1. HESSLER, HUGO.—Phosphorus Poisoning. (*Vierteljahr. für Gerichtl. Med.*, Band xxxv, p. 248; and Band xxxvi, p. 10.)
- 2: Poisoning by Laburnum. (*Brit. Med. Jour.*, Feb. 11, 1882.)
3. SCHELLE.—Poisoning by Tartar Emetic. (*Friedreich's Blätter für Gerichtl. Med.*, 1882, p. 8.)
4. HOHN and REUBOLD.—Arsenic. (*Ibid.*, pp. 15, 22.)
5. ALLEN.—On Strychnine. (*Commercial Organic Analyst*, vol. ii, p. 486.)
6. CORNILL and BRAULT.—Phosphorus and Arsenic. (*Gaz. Hebdomadaire de Méd.*, Jan. 13, 1882.)
7. JORISSEN.—Test for Morphia. (*Zeitschr. für Analyt. Chem.*, Band xx, p. 422.)
8. DEY.—Poisoning by Red Lead. (*Rep. Calcutta Med. Soc.*, July 13, 1881.)
9. CHURTON.—Silk-Thread as a Source of Lead-Poisoning. (*Brit. Med. Jour.*, Dec. 1881, p. 1013.)
10. POPOFF.—Arsenic Poisoning. (*St. Petersburg Med. Woch.*, No. 33, 1881.)
11. DANILLO.—Phosphorus Poisoning. (*Arch. Génér. de Méd.*, Jan. 1882.)

1. *Hessler on Poisoning by Phosphorus.*—Hugo Hessler contributes a paper on acute phosphorus poisoning (*Vierteljahr. für Gerichtl. Med.*, Band xxxv, p. 248, and Band xxxvi, p. 10). He summarises his conclusions as follows. 1. The commencement of toxic symptoms is not so dependent upon the form in which the poison is administered and its quantity, as upon the susceptibility of the individual, and the contents of the stomach at the moment of ingestion. 2. Icterus of the skin is a constant symptom, and usually appears on the third day. It is rather of hæmatogenic than of hepatogenic origin. 3. Virchow's gastro-adenitis is a never-failing pathological lesion. 4. There is no distinctive difference observable between acute phosphorus-poisoning and acute atrophy of the liver, either in the commencement or in the course of the illness; nor in the lesions of the liver; nor even by chemical tests applied to the urine. 5. Statistics show that the prevalence of changes in the muscles of the lower extremities (fatty degeneration) is characteristic of acute phosphorus-poisoning. 6. In acute phosphorus-poisoning the blood is rather thin and dark red, than viscid, and the ecchymoses are unequally distributed in each organ, and most extensively in the pectoral viscera. Both these appearances are direct results of the phosphorus-intoxication acting through the heart, liver, and kidneys. 7. Chemical investigations have shown that, in animals destroyed by phosphorus, the process of oxidation of the phosphorus is not so much dependent upon the time which has elapsed, as upon the amount of air and oxygen in the part in which the phosphorus is oxidised into phosphoric acid. 8. The detection of phosphorus chemically is not absolutely necessary for the diagnosis of phos-

phorus-poisoning. This must be accepted as either probable or certain, when the above-mentioned proofs lend support to the assumption that the case is one of poisoning, and when there are no other diagnostic factors to elucidate the case. 9. Casper's four criteria of poisoning are equally important for diagnosis, and must be borne in mind. They support one another, and are the more diagnostic in proportion as they are exact and extensively distributed.

2. *Poisoning by Laburnum.*—Two fatal cases are recorded (*Brit. Med. Jour.*, Feb. 11, 1882) of poisoning by some undetermined portions of the laburnum tree. Two children, aged 3 and 8 years respectively, are supposed to have eaten of the tree (probably the pods) at the same time. The elder girl, 8 years of age, was seized with vomiting and diarrhoea. She complained of headache, and was prostrate. Six hours later, vomiting and diarrhoea had ceased. She then made a noise in her breathing, and continued in much the same state till her death, about fourteen hours from the commencement of the illness. Next day, the younger girl, $3\frac{1}{2}$ years of age, became tired, sleepy, and vomited frequently. She passed two motions. Five hours later she was convulsed, and the convulsions continued till her death, eight hours from the commencement of the illness. The symptoms manifested by the two children thus showed marked differences. The only noticeable appearances, *post mortem*, were in each case marks of irritation of the gastro-intestinal mucous membrane. No fragments of the plant were detected in the alimentary canal of either child; but the alkaloid cytisine was extracted from both children, and not only reacted as such to tests, but was given with fatal effect to a mouse.

3. *Schelle on Tartar-Emetic.*—Dr. Schelle (*Friedreich's Blätt. für Gerichtl. Med.*, 1882, p. 8) communicates a case of poisoning by tartar-etic. One gramme ($15\frac{1}{2}$ grains) of the salt administered as an emetic caused the death of a young man in six hours. On exhumation of the corpse, the characteristic pustular eruption produced by tartar-etic was found on the gastric mucous membrane.

4. *Hohn and Reubold on Arsenic.*—Drs. Hohn and Renbold (*Friedreich's Blätt. für Gerichtl.*, pp. 15, 22) also publish interesting cases of acute arsenical poisoning. In Hohn's case, the body was exhumed after being buried for more than fourteen years, and arsenic was detected in it.

5. *Allen on Strychnia.*—Allen (*Commercial Organic Analysis*, vol. ii, p. 486) utilises the optical properties of a compound which strychnia forms with iodine for the detection of the alkaloid. A very small drop of an alcoholic solution of iodine is placed on a microscope slide, and allowed to evaporate. Directly it is dry, a drop of the solution of the supposed alkaloid in acetic acid with a drop of sulphuric acid is added; a drop of rectified spirit is then placed on the mixture, which is allowed to evaporate spontaneously. On examining the residue under the microscope with a Nicol's prism and selenite, but using no analyser, characteristic crystals will be observed if strychnia be present. These may have the form of circular tufts of fine black needles; of minute dots, of a more or less triangular form, exhibiting yellow, pink, and green tints; large triangular crystals of a yellow or green colour, composed of three parts radiating from a centre; solid naced prisms, occasionally showing complementary tints; or solid rosettes of four, five, and six-sided prisms. In all cases it is, of course, desirable to compare the results

with those obtained in a similar manner from a minute quantity of strychnia. The essential conditions are the simultaneous presence of alcohol, sulphuric and acetic acids, free iodine, and a trace of strychnia.

6. *Cornil and Brault on Phosphorus and Arsenic.*—Cornil and Brault (*Gaz. Hebd. de Méd.*, 13 Jan. 1882, p. 27) have experimented upon the lesions induced by the administration of phosphorus. They find that a non-inflammatory fatty degeneration at once sets in, attacking the liver, kidneys, and lungs. This fatty degeneration is speedily followed by complete destruction of the cellular protoplasm and nuclei. When arsenic is administered, similar pathological changes are produced; but these are less regular than is the case with phosphorus, and the lungs are the organs most frequently attacked.

7. *Jorissen on a Test for Morphia.*—Jorissen (*Zeitschr. für Analyt. Chem.*, Band xx, p. 422) proposes a new and delicate test for morphia. A solution of the alkaloid, free from foreign materials, is evaporated to dryness, and the residue is heated in the water-bath with sulphuric acid. A minute crystal of ferrous sulphate is added, and stirred with a glass rod. The mixture is heated for a minute longer, and poured into a white capsule, containing about half a fluid drachm of strong solution of ammonia. The morphia solution sinks to the bottom, and a red colour—violet at the margin—forms where the two liquids touch, whilst the ammoniacal liquid becomes blue. Codeine does not give this reaction, which succeeds with one-tenth of a grain of morphia.

8. *Dey on Poisoning by Red Lead.*—Assistant-Surgeon Kanny Loll Dey (*Rep. of Calcutta Med. Soc.*, July 13, 1881) reports a case of suicidal poisoning by red lead. A woman was seen alive at 8 a.m. At noon, she was found groaning and in convulsions. She struggled for about an hour in this condition, and then expired. The only very noticeable appearances met with at the necropsy was corrosion (*sic*) of the stomach, and the mucous coat easily separable. This is perhaps the only recorded fatal case of poisoning by red lead.

THOMAS STEVENSON, M.D.

9. *Churton on Silk Thread as a Source of Lead Poisoning.*—Dr. T. Churton records, in the *Brit. Med. Jour.*, Dec. 1881, p. 1013, a case of lead-poisoning in a dress-maker, where he was puzzled to trace the origin of the poison. Accidentally hearing that silk thread was sold by weight, and that it was the custom to moisten it with a lead salt, he gained a clue to the mystery. [A glance at section 288 of the *Medical Digest* at once shows that this source of poisoning has been known since 1866.—*Rep.*]

R. NEALE, M.D.

10. *Popoff on Arsenical Poisoning.*—Dr. N. Popoff, after a series of experiments in Mierzejewski's laboratory (*St. Petersburg Med. Woch.*, No. 33, 1881), comes to the following conclusions respecting arsenical poisoning: 1. That arsenic may, within a few hours after its application, cause an unmistakable alteration of the spinal cord, which may manifest itself either as myelitis centralis acuta or poliomyelitis acuta; 2. That in more chronic cases an inflammation may result, not only of the grey substance but of the white also, constituting a diffuse myelitis; 3. The peripheral nervous system is unaffected in those cases in which death occurs within three months after the reception of the poison; 4. That the paralyses from arsenic poisoning are of central origin. He has had similar results with lead, and believes that in long continued metallic poisoning,

alterations in the spinal cord are very likely to occur.

11. *Danillo on Phosphorus Poisoning*.—Dr. M. S. Danillo (*Archives Gén. de Méd.*, Jan. 1882) comes to the following conclusions respecting the pathological anatomy of the spinal cord in poisoning by phosphorus. 1. Changes in the spinal cord from phosphorus intoxication are of myelitic nature. 2. In acute phosphorus-poisoning, the central nervous system contains only dépôts of pigment of hæmatic origin. 3. Large doses of phosphorus give rise to a central myelitis involving the entire length of the spinal cord, with extravasation and pigmentation; small and frequently repeated doses occasion a diffuse myelitis. 4. Certain nervous phenomena, observed during life as consequences of phosphorus intoxication, result from either one of these types of myelitis. In cases of poisoning by phosphorus, attention has been chiefly devoted to the liver, but these observations would seem to show that the central nervous system also requires extended chemical examination.

REVIEWS.

Surgical Lectures delivered in the Theatre of the Westminster Hospital. By RICHARD DAVY, M.B., F.R.C.S., Surgeon to the Hospital. London: Smith, Elder, and Co. 1880.

'SAID Plato, "He shall be as a god to me, who can rightly divide and define." Men who have this faculty—the "Blick" of the Germans—we cannot produce directly by any system of education; they come, we know not when or why, forming a small band, a mere understanding of whose thoughts and works is a test of our highest powers.' So spoke Dr. Billings, in his address before the International Congress. Now, though it is far from being a test of the highest powers, even of a reviewer, to understand the action and value of Davy's lever, yet the book before us shows that its author has, in an extraordinary degree, the gift of invention, an essential part of which is 'this faculty (of seeing, dividing, and defining),—the Blick of the Germans'. For, whether it be a new instrument, a picture, or a poem, inventor, artist, and poet must alike 'divide and define' what lies before him ere he can 'body forth the forms of things unknown'.

It would be idle to enumerate the leading inventions noticed in this book, because, over and above them, it is studded with cunning suggestions and happy thoughts. These will strike the reader at the first glance, partly from their nature, and partly because the style is plain, honest, and straightforward everywhere. We will say no more, therefore, in praise of the book, than that every surgeon who takes the slightest interest in surgery will find these lectures interesting.

But he who reads attentively, reads critically. We must, therefore, take exception here and there. Firstly, the author seems inclined to value too highly some of his own ideas, and to respect too little the inventions of others. The lecture (II) on 'Hammock Suspension', etc., in the treatment of spinal curvature, is too superficial, and the sentence, 'I venture to express my opinion that, in future, more spinal curvatures will be fortified in the manner I am now about to describe than after the suspension-method of Sayre,' is illustrative of the remark just made. Judging by an extensive experience of Sayre's treatment, we confess the belief that the horizontal

position is neither necessary nor desirable in the application of ninety-nine jackets out of a hundred, and that, in the odd case, the patient can be banded easily when stretched across the interval between two stools or two tables, without being swung in a hammock or anything else. Moreover, if a second jersey be placed next the skin, as in Mr. Oxley's practice, or a handkerchief, the hammock involves three layers of soft structure between the plaster and the body.

In the matter of statistics, Mr. Davy falls into the usual error of generalising from far too few cases. Lecturing on 'the dressing of wounds', he states that during the preceding two years (1875-6) he had performed 33 excisions and amputations, of which 5 were large amputations, 5 Syme's amputations, 8 excisions of the largest joints (hip, knee, and shoulder), and 15 ranged in point of seriousness from excision of the breast to amputation of fingers. For what the operations were done is not stated; but no death resulted. We presume some conclusion is expected to be drawn from these statistics, because the preceding paragraph runs as follows: 'For the last three years, as many of you know, most of the wounds received into my wards have been exposed to the air without any dressing whatever; and we may now fairly judge of the results obtained by this method.' Moreover, in the same lecture, a number of dogmata are laid down in the most positive manner, while of Lister's antiseptic system it is declared that, in ordinary surgical work, 'the game is really not worth the candle'. With reference to a table of seventeen cases, in which Davy's lever was used, the author states that 'it seems to prove conclusively that the mortality decreases *pari passu* with the amount of blood lost'. Now, a calculation will show that the fatal cases lost an average of 2.7 ounces each, while the recoveries lost 1.7 ounces each. But the ages of the former patients averaged 23.3 years each, and the ages of the latter only 13.7 years each; which average would, by the removal of a single patient, aged 43, be brought down to 10.3 years. Such statistics, taken alone, demonstrate nothing except the simple numerical facts which they represent. Surgical statistics are only worthy of being generalised on at all when they refer to large numbers extending over a number of years, and can scarcely be said to 'conclusively prove any grand law' unless they have been collected at different places. For, the surgeon, employing his means to defend wounds from 'accidental' diseases, as they are called, is like a commander using military forces to defend a country. Some countries, like our own happy land, are, by their natural position, safe from invasion; so are some hospitals. Even less fortunate countries have times of peace and of war, distinct and alternating, the latter also varying in degree of danger, while hospitals have periods of health alternating with those of plague. But the wise commander strives always to keep his forces trained and armed according to the best teachings of modern military science; he would not plead, as an excuse for arming our volunteers with Brown Bess, that no foreign foe had trod English soil while that was our best weapon. Then, surely, the wise surgeon should not think to defend adherence to one system, and, despite of another, while giving, as a prime reason, the experience of one hospital in two years, including *e.g.*, less than a score of major amputations. Pestilence and war alike are apt to come without warning. So, we gather casually from different parts of his own book, that, the very next year, Mr. Davy lost

a partial excision of the tarsus for deformity by acute septicæmia, and an amputation through the knee-joint, twenty days after operation, from 'constitutional and accidental causes'.

'Subject IX' heads a lecture on the treatment of stricture, especially by splitting with a new instrument of the author's. Here we have more statistics, and another crowd of the metaphors which tend to make the book amusing and more readable. There were 3 deaths in 115 cases; and the surgeon who, being used to splitting, refuses to urethrotomy, is compared to David refusing to put on Saul's armour. Teevan's statistics of urethrotomy, if we remember rightly, gave 10 deaths in 1,192. Some people would consider that these statistics, compared with the others, 'prove conclusively' that Saul hath slain his thousands, but David his tens of thousands. Statistics are treacherous things, and are easily persuaded to sting the breasts of those who too readily nourish them.

In conclusion, we hope that Mr. Davy will take our criticisms in good part; and we further hope that everyone will buy his book, or, at all events, read what, in spite of a few faults, is an excellent, a pleasant, and a remarkable work.

C. B. KEETLEY.

A Plea for Early Ovariectomy. By G. G. BANTOCK, M.D., F.R.C.S.Ed., Surgeon to the Samaritan Free Hospital for Women and Children. London: H. K. Lewis. 1882.

In this work, the author objects to the practice of delaying operation after the diagnosis of an ovarian cyst in an early stage, till the patient's health is impaired, for the following very sound reasons. The principle of such a delay is a departure from that generally followed in the case of other diseases treated surgically. The presence of the tumour is the cause of structural disease in other organs. Ovarian tumours are liable to a variety of accidents, such as rupture, either spontaneously or from injury, and twisting of the pedicle; they may likewise inflame, and extensive hæmorrhage may take place into their cavities through degeneration of their blood-vessels. The existence of adhesions, or of degenerative changes in ovarian tumours, greatly interferes with the success of the operation, whilst, on the other hand, the earlier and simpler the operation, the greater is the chance of recovery. Dr. Bantock also objects to tapping, a palliative which is not only of very transient benefit, but is also not without risk, and never fails to increase the dangers of a subsequent operation. In this point, he is amply supported by others who entirely disagree with his general views concerning ovariectomy. From a general surgical point of view, Dr. Bantock's arguments can scarcely be refuted, especially when we remember that a small multilocular cyst in a healthy woman, if left alone, will become a large multilocular cyst in an unhealthy one; whilst, if it be removed, the operation will be perfectly simple, and the risk less than it can possibly be, under any circumstances, in a later stage.

Contribution à l'Etude de l'Ostéite Destructive. Par D. MORISANI, Laboratoire d'Histologie du Collège de France. Travaux de l'Année. Paris: Masson. 1881.

THE theory which forms the basis of Kölliker's opinion concerning the function of osseous cells in this morbid process, is the one most generally ac-

cepted. It asserts that the destruction of compact osseous tissue is due to the imperfectly understood action of the osteoblasts which form Howship's lacunæ. Although researches have proved that the destruction of osseous cells is not absolutely constant, it is generally admitted that the part they play in inflammation of bone is passive. M. Morisani studied specimens of osteitis representing different periods of their morbid condition. We give the method he adopted. He separated from the bone, by means of a very fine saw, small fragments. These he macerated for two hours in filtered lemon-juice, afterwards washed them in distilled water, and then soaked them in an aqueous solution of chloride of gold; the gold was then immediately reduced by water and a few drops of acetic acid, acting in the presence of light.

In nearly all forms of osteitis, there exists, along with the destructive process, bony formation. In osteitis, with intense infiltration of the medullary tissue, new bony formation takes place in the cavity of the dilated canals. The predominance of the destructive or the productive process determines the form of osteitis under observation.

M. Morisani classes destructive osteitis under the heads of acute and subacute, or chronic. His microscopic examinations furnish the reasons for this classification. In acute osteitis, the tissue is rapidly destroyed. The medullary tissue is composed principally of young elements. In the second, there are indications of inflammation, but less marked. It is not uncommon to meet with both forms in one specimen; but lines of demarcation, limiting the predominance of one or the other, can always be traced. The chronic form is the most favourable for the study of lesions of bone. In the marrow, there is always a slight infiltration of young elements. The medullary cells are greatly increased in size and very granular, and the network of the connective tissue is remarkably visible. The borders of the bony tissue, subjacent to the medullary tissue, are not sharply cut, as is the case in some destructive forms, but are composed of fibrils. These mingle with the tissue which fills the medullary canal. This decomposition of the osseous tissue into fibrils does not always take place in the whole of the medullary canal in a marked degree, but only in limited regions. In others, there are not any signs of this decomposition. The aspect of the fibrils is variable; sometimes their direction is identical with the osseous lamellæ, sometimes they are perpendicular to them, and interlace them in every direction. M. Morisani was unable to colour the fibrils. All colouring agents failed, even magenta red, which deeply coloured the osseous substance. The relation of the fibrils with the medullary tissue is less variable; their continuation with the connective tissue of the medullary canal is very evident. This feature, joined to others which characterise the fibrils of the connective tissue of the medullary canal, lead M. Morisani to conclude that their origin is in the osseous tissue, and thus interpreted that they are the glutinous fibres that Ebner has described as forming the organic reticulum of bone, an opinion which has been confirmed by many. In osteitis, where infiltration of the medullary tissue is very intense, it is impossible to see anything on the border of the bone: young cells rest on it.

M. Morisani proposed to study whether the rôle of osseous cells in bony inflammation is active or passive. His observations were attended by negative results. He never saw the slightest indication of multiplication of cells. His conclu-

sions are as follows. In chronic osteitis, the distinction of the compact portion of the bone is owing to a gradual absorption; the fundamental tissue is decomposed into fibrillæ, which are connected with the fibrillæ of the connective tissue of the medullary canals and Haversian canals, and probably contribute to form the network of connective tissue of these spaces.

In rapid forms of osteitis, accompanied by disordered nutrition of a severe character, there is granular disintegration of the stroma of the bone, with absorption of calcareous salts.

In chronic forms, the osseous cells do not die as the compact tissue is absorbed, but fall into the medullary spaces, and there probably change into the connective tissue cells of those spaces. M. Morisani thinks it probable, in acute forms, that they are destroyed by the results of intense inflammation. Both in the chronic and in the acute form, the destruction and disappearance of compact bony tissue is in direct proportion to the increase in the number and volume of the vessels, and is probably the result of the changes determined by the inflammatory exudation.

W. VIGNAL.

De la Syphilis du Testicule. Par le Dr. RECLUS. Paris, 1882.

In a carefully written monograph of between 200 and 300 pages, Dr. Reclus has set forth his views on the subject of syphilis of the testicle. The clinical and general portions are the result of his own experience and study; the microscopic anatomy has been entirely supplied by Dr. Malassez, whose name is a sufficient guarantee for the thoroughness of the histological investigations. The views of the author are neither original nor very striking; they may be found in many text-books on syphilis. They may be summed up in a few sentences. Two forms of syphilis of the testicle are common, sclerosis and gumma; but these two forms do not differ as they have been often thought to do: they are almost always associated, and the gumma always occurs in the sclerosed portions of the organ. Gumma occurs both in the tunica albuginea and in the interior of the testis. The symptoms and course of the disease depend partly on whether sclerosis or gumma predominates, partly on the part of the testis which is affected. The sclerosed testis does not suppurate, but tends to atrophy; the gumma may break down, and fistula or hernia testis may be formed. The treatment of syphilitic testis, of whatever kind, is by large doses of iodide of potassium. Mercury is not necessary; local treatment is superfluous.

M. Malassez teaches that the primary changes of sclerosis take place in the connective tissue, and not within the tubules. The connective tissue between the tubes, of the walls of the blood-vessels, and of the walls of the seminal tubes, is thickened by interstitial deposit, and the tubes become consequently atrophied. In the midst of this sclerosed tissue gummata are formed, many of them very tiny—scarcely distinguishable with the naked eye—others of much larger size. The grouping of the cells, which are either small, round, and granular, or of large size (migrated cells), and epithelioid in appearance, distinguishes the smallest gummata from tubercles; for they are found in the interstitial tissue, apart from the seminal tubes and large vessels; whereas, in tubercular testis, they are found about the canaliculi. In a caseous gumma, four zones may be dis-

covered—an external fibrous zone, the sclerosed tissue in which the gumma lies; a red border formed of parallel fibrous bands, in which are proliferated connective-tissue cells, and veritable islands of embryonic and migrated cells, and capillaries filled with white corpuscles; a clear border, of similar fibrous bands, separated by trabeculæ of badly coloured granular cells; a central mass, mortified, possessing a lobular arrangement, the lobes of which are composed of caseous material, surrounded by clear trabeculæ of fibrous tissue. The central mass becomes caseous on account of the vast quantity of cells which are collected in one spot, which require nourishment in excess, and receive it in diminished quantity on account of the sclerosis of the walls of the vessels and consequent contraction of their calibre. The clear border is an investing membrane, similar to that which forms around foreign bodies. The red border is a portion of the investing membrane in process of formative activity.

Even if this monograph contains nothing essentially new, it is at least as complete a work as any which exists on syphilis of the testicle. The drawings are exceedingly good, both of the naked eye and histological characters of the disease, and no one can read the clinical chapters without considerable benefit.

HENRY T. BUTLIN.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By S. W. GROSS, A.M., M.D. Pages 174. London: H. Kimpton. 1881.

In this book, the disorders of the male sexual organs are considered in four chapters, headed respectively—1. Impotence; 2. Sterility; 3. Spermatorrhœa; 4. Prostatorrhœa.

With regard to the first and third of these disorders, the author objects to the term 'functional', usually applied to them, and states that, according to his own observations, they usually depend upon reflex disturbance, almost invariably induced or maintained by appreciable lesions of the prostatic urethra. Masturbation is, of course, by far the most frequent cause; and special stress is laid on the comparatively large number of cases of stricture (13 per cent., according to Dr. Gross's experience), which owe their origin to urethritis set up by the practice of onanism.

Sterility in its various forms is fully described under the three heads of Aspermatism, Azospermism, and Misemission; the latter including vices of conformation of the urethra and malposition of the meatus. In connection with this portion of the subject, the author insists on the necessity for examining the husband in cases of unfruitful marriage, considering him, as a rule, to be at fault in one case out of six.

Dr. Gross has succeeded in giving a clear and practical description of a very troublesome class of diseases, and his book is well worth reading.

ARTHUR COOPER.

The Science and Art of Midwifery. By W. J. LUSK, M.D., Professor of Obstetrics in the Bellevue Hospital, New York. London: H. K. Lewis. 1882.

THE author states that his purpose has been to present to the reader a fair account of the changes which have been made by modern investigation, in the views

entertained respecting the physiology and pathology of pregnancy, labour, and child-bed.

He further states that he has given special prominence to the labours of German investigators, because they have of late occupied a vantage-ground, of which, to their credit, they have been prompt to avail themselves. In our opinion, however, the chief improvements in modern obstetrics will be seen in the copious illustrations from Ribemont, Chantreuil, Budin, and Tarnier, with which Dr. Lusk has enriched his book. Indeed, most of the so-called German improvements figured in the work, such, for instance, as the 'Prague Method of Extracting the Head', p. 365, have been, in this country at least, time-honoured manipulations, practised by all experienced midwives for years past. The expression of the fetus by Kristeller's method is another example of long familiar manipulations in most of the lying-in hospitals in Great Britain. The remarks on phlegmasia alba dolens are meagre, and do not set forth the full extent of recent advances in the subject. The figure illustrating the extraction of the child from the uterus after Cæsarian section has not been happily chosen. It represents the child in process of being extracted feet first in a breech-presentation. Surely it would have been more natural to represent the child in the reverse position, seeing that head-presentations are in the proportion of about 200 to 1 of breech. Although the work in some parts is not nearly so full as might have been expected from a teacher of Prof. Lusk's reputation, it forms, in some respects, a fair enough reflex of recent obstetric movement. It will not, however, we fear, compete successfully with the more complete works on the subject by Leishman and Playfair in this country, and certainly not with the magnificent work which is now appearing in Paris by Tarnier, the late Chantreuil, and Budin.

The book consists of 663 pages, and contains 226 illustrations. No doubt, in future editions, it will undergo considerable additions and expansion. Some of the drawings require revision, as, for instance, fig. 156, showing the position of operator when the head is on the perinæum. In this drawing the operator's right hand is represented supporting the perinæum, whilst his left is seizing the forceps in the extraction of the head. Among the five perforators figured at pp. 378 and 379, there is not one really scientific instrument. The most serviceable and trustworthy instrument which we possess for perforating the foetal head, that of Oldham, is omitted.

FANCOURT BARNES, M.D.

The Midland Medical Miscellany. Vol. i, No. 3.
Richardson and Co., Leicester.

THE *Midland Medical Miscellany* is a new monthly magazine of medicine and materia medica, published by Messrs. Richardson and Co., the eminent manufacturing chemists of Leicester. Prefixed to the extensive monthly price list of this firm is a good deal of interesting preliminary matter, including notices of some of the leading topics of the day: an excellent lithographed portrait is also given this month, being a remarkably good likeness of Dr. W. B. Carpenter, F.R.S.; and a selection of articles on such current subjects as 'Poor-law Scandals', 'Medical Letters', 'Superannuation of Poor-law Officers', etc., etc.

RECENT BALNEOLOGICAL WORKS.

1. *Die Trinkskur in Wiesbaden.* Von Dr. EMIL PFEIFFER. 12mo, pp. 69. Wiesbaden: 1881.
2. *On the Physiological and Therapeutic Properties of Mineral Waters, and their Administration in Chronic Diseases.* By PAUL KILIAN, M.D. 8vo, pp. 52. London: 1881.
3. *The Mineral Thermal Springs of Châtel-Guyon in Auvergne.* By G. H. BRANDT, M.D. 12mo, pp. 30. London: 1881.
4. *Die Heissen Luft- und Dampf-Bäder in Baden Baden: Experimentelle Studien über ihre Wirkung und Anwendung.* Von Dr. A. FREY and Dr. F. HEILIGENTHAL. 8vo, pp. 170. Leipzig: 1881.
5. *Meine Erfahrungen bei 600 Diabetikern.* Von Dr. R. SCHMITZ. 8vo, pp. 25. *Deutsch Med. Wochenschrift.* 1881.
6. *Brunnen und Bade Orte Praktisches Reise-Handbuch.* 6th Ausgabe. 12mo, pp. 182. Berlin: 1881.

1. The author gives the results of a long series of experiments made on his own person, carefully and laboriously conducted, which in essentials confirm the previous ones of Genth and Neubauer. The action of the Wiesbaden waters on the urinary organs is a very decided one. The augmentation of the urine is very considerable, and far greater than the increased consumption of water. It is quite marked even with small quantities of the Kochbrunnen. An increased drinking of the Kochbrunnen produces an increase in the quantity of urine, and this augmentation is greater than the mere increase of water that is drunk.

If the whole quantity of the Kochbrunnen water be drunk in the morning, when the stomach is empty, the total amount of urine secreted is greater than when the same quantity is taken in divided doses during the day. The solid constituents of the urine, and especially the urea, are distinctly increased by the use of the Kochbrunnen; and this increase is greater than the amount of the solid constituents which have been present in the water drunk. If the Kochbrunnen be taken in the morning on an empty stomach, more urea is secreted than if it be taken in divided doses during the day; whereas the total amount of solid constituents, including urea, is largest under the latter circumstances. On giving up the use of the Kochbrunnen, the secretion of solid constituents and of urea falls something below the normal standard. If the Kochbrunnen be taken in quantities sufficient to produce loose motions, the amount of the solid constituents and of the urea of the urine is considerably diminished.

Dr. Pfeiffer then proceeds to divide the methods of cure into two; first, the local method, the characteristic of which is the dose of the water remaining the same; second, the general method, characterised by the use of increasing doses. He concludes with an account of the diseases which find relief at Wiesbaden, and of those for which each mode of treatment is best adapted.

2. The contents of this *brochure* scarcely correspond with its title; but if for chronic disease we substitute the word gout, that would probably indicate its character pretty correctly. In the commencement, there are a few remarks on the use of mineral waters in spinal affections, extending over some pages. After that, everything has reference

more or less directly to gout and its treatment. Alkaline waters are shortly noticed, but the author speedily throws himself into an exposition of Cantani's views on the pathology of gout. This is done at great length, and the concluding pages are devoted to hints on the diet of gouty patients. There are various useful observations to be found in the pamphlet concerning the selection of mineral waters, such as might have been expected from a man of Dr. Kilian's experience; and a good deal of information has been brought together respecting the action of alkaline waters and the theory of gout. Dr. Kilian tells us that this is the first of a series of papers on mineral waters. We hope that in the next one the subject may be treated less discursively, and that there may be more about the remedial agents of which he treats.

3. In this well-arranged little sketch, Dr. Brandt calls attention to one of the numerous Auvergne springs that has of late been coming into fashion.

He finds the waters suitable for cases, which from their complicated nature, involving liver, spleen, and kidneys in a more or less congested condition, require an after-cure after treatment at Royat. The water principally used is of the temperature of 95 deg., and well supplied with carbonic acid. In a rough way, it may be said to contain about 50 grains of solid constituents to the pint. They consist mainly of chloride of magnesium, 12 grains; chloride and carbonate of sodium, 19 grains; carbonate and sulphate of lime 19 grains; along with a little potash, silica, lithia, and iron. The water is not at first very pleasant to the drinker, as it leaves a styptic after-taste. The water is in doses of one to three glasses markedly aperient. It also acts distinctly on the kidneys and on the skin. Physiological experiments have led to the chloride of magnesium being regarded as the active principle. We think that this is carried too far; but it is interesting, as that substance occurs in many of the English and Scotch springs. The large quantity of lime present is not taken into account, being assumed to be inert in the form of carbonate and of sulphate. But, in the form of chloride of calcium, it has been supposed to be an active agent at Kreuznach and in some British springs, which latter unfortunately contain no carbonic acid to relieve their disagreeable taste.

4. The new bath-house at Baden Baden, which is probably the finest in the modern world, is not only intended for the use of those who intend to make the ordinary use of the thermal waters, but it also contains a magnificent suite of apartments devoted to every variety of treatment, and especially including luxuriously furnished hot-air and vapour baths. Although considerable light has been thrown on the operation of the latter on the system, the action of the former has remained, comparatively speaking, uninvestigated. We are therefore much indebted to Dr. Heiligenthal, the government director of the establishment, and to Dr. Frey, for the careful series of experiments which they have made with the view of determining, more accurately than hitherto has been done, the difference of action between these two classes of baths. Much light has been thrown by them on a subject in which there has been much vagueness and obscurity. We can only summarise some of their conclusions.

The *résumé* of their experiments gives very similar results for hot air and hot vapour baths; we shall note the chief differences. The sensibility of the skin to impressions of touch and of temperature

was increased during, and especially after, the bath, whether hot air or vapour. The general feeling of comfort and of power was increased after either bath. On first entering the bath of either kind, there was contraction of the capillaries of the skin, caused by the stimulus of heat, followed by increased arterial pressure and moderate acceleration of pulse. Soon after this, there was immense expansion of the cutaneous capillaries, the arterial pressure diminished, the action of the heart increased much in frequency, and the contractions of the heart were lessened in force. There was increase of temperature.

During the whole bath process (with the exception of the entrance into the hot room in the case of air, and of the vapour in the case of vapour baths) the skin had an increased flow of blood; the internal organs a diminished one. The respiration was very slightly affected in frequency. In the hot-air bath, the temperature of the rectum long remained normal, and only after half-an-hour rose about two-tenths. On entrance, the temperature of the axilla fell several tenths of a degree, but soon rose and reached the temperature of the rectum or a few tenths more. On entrance into the vapour bath, the temperature in the rectum rose pretty quickly and sharply in the axilla, until the last exceeded the first by about 2.2 deg. The temperature of the rectum rose to 4.4 deg. above the normal one. In the air-bath there was profuse perspiration, less profuse in the vapour bath.

On bathing days, the quantity of urine was considerably diminished; its specific gravity was considerably increased. The secretion of urea was, on the first day, diminished, afterwards somewhat increased. The uric acid was in the hot-air bath increased twofold; in the vapour bath, three-fold. The increase of urea and of uric acid continued for some days after the baths were given up, and the amount diminished gradually day by day. In the air-bath, there was considerable acceleration of the fluids of the body—but only moderately accelerated transformation of tissue; therefore three successive baths reduce the weight of the body but little. In the vapour bath again, the circulation of the fluids was less accelerated, while the transformation of tissue was greatly increased. Thus, three baths taken successively can reduce the weight of the body materially. From this *résumé* the authors draw a few important general conclusions. The operation of the vapour bath is on the whole more active than that of hot air. The same results are produced by it in a shorter time and with greater intensity than by hot air. The temperature of the body is raised in a few minutes in the vapour bath to a height which is not reached after hours in the air bath. Pulse and respiration are from the very beginning at least as much quickened in it, as after some hours in the air bath. Therefore *ceteris paribus*, the air can be borne longer than the vapour bath. The final loss of weight is greater in the vapour than in the hot-air bath. The excretion of important products of combustion, as a measure of transmutation of tissue, and of urea and of uric acid, as a measure of the combustion of albuminous bodies, is more important after the vapour than after the air bath. From these few facts, it results that vapour baths are on the whole indicated for strong constitutions with some power of resistance and that are not very excitable, while hot-air baths are best adapted for weaker and less excitable constitutions, which have less power of resistance. The vapour bath is, therefore, suited especially for men in the fullest powers

of manhood; the hot-air bath for old men and for very young or delicate individuals.

5. In this paper, Dr. Schmitz summarises the results derived from his large experience of diabetes. He enters fully into the etiology, symptomatology, and pathology of the disease. But as, like most other practical men, he looks mainly to diet as the remedy for diabetes, and on the present occasion alludes but slightly to the waters of Neuenahr, a lengthened notice would be out of place here.

6. This is a compact and excellent hand-book of all the mineral waters of Germany, meant for general use, but which many a medical man will be glad to refer to. It treats exclusively of German, Austrian, Belgian, and Dutch spas and sea-side places; it has been remodelled, and fulfils its promise as a practical guide for the stranger. Of course there are inaccuracies, and the lists of medical men practising at various stations require revision.

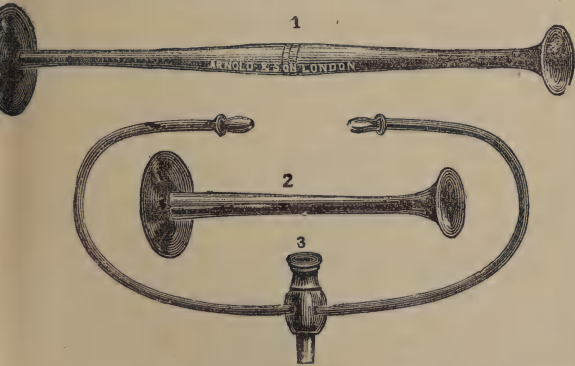
J. MACPHERSON, M.D.

NEW INVENTIONS.

A NEW CONVERTIBLE STETHOSCOPE.

The 'Convertible Stethoscope' is a very simple arrangement for promoting the practical study of auscultation with both the single and the double instrument, introduced by Dr. John Ward Cousins, Surgeon to the Royal Portsmouth Hospital. It consists of a flat ear-piece; a shaft, nine inches in length, separable into two parts; and a flexible tube, with perforated wooden ear-plugs. These separate parts are all adapted to each other by the same simple joint; so that, by fitting them together in different combinations, four stethoscopes are produced.

1. A long single stethoscope, adapted for subclavicular auscultation (Fig. 1). This form of instrument



is often very useful in practice; for, by its length, the head is kept away from the face of the patient, and it also prevents uncomfortable stooping over the bed.

2. An ordinary short stethoscope (Fig. 2), which is especially serviceable for the dorsal examination of patients confined to bed.

3. A double stethoscope (Fig. 3). The shaft of the short single tube completes the instrument. The ear-plugs are retained in position, without pressure, by adapting them to the size of the external auditory canal, and not by fixing them in the ears, as in the ordinary binaural stethoscope, by means of an elastic band attached to the ear-tubes. This method removes at once some of the most common objections raised

against the instrument. It prevents the uneasy sensation of pressure in the meatus, and also the friction-sounds which are often perplexing to the student. The ear-plugs, moreover, are made in several sizes, to suit the varying capacity of the canal; and this is a little practical matter very necessary to remember in selecting an instrument. This will be found a very handy form of stethoscope. The chest-sounds can be examined with both ears, and then again with either ear alternately, by simply compressing the elastic tubes between the finger and thumb; in this way, the single and double auditory impressions may be conveniently compared and studied.

The instrument is made by Messrs. Arnold and Sons, of West Smithfield, and is supplied in a small case, so that it can be carried in the pocket very conveniently, and with more safety than the ordinary stethoscope. The price of the convertible stethoscope, with binaural tube, in leather case, is *ros. 6d.*; ditto, with differential tubes, *15s.*; ditto, ditto, with chest measure, marking pencil, and thermometer, *25s.*

INSTRUMENT FOR GASTROSCOPY AND ESOPHAGOSCOPY.

Dr. Mikulicz, one of Professor Billroth's assistants, has, in conjunction with Herr Leiter, the Vienna instrument-maker, contrived an instrument for the above purposes. It consists of a thick inflexible tube, twenty-six inches long, and rather less than half-an-inch thick. This tube contains insulated wires for the electric current used for illumination, two water-cannals, a fine air-tube for the inflation of the stomach, and the wide lumen for the optical apparatus. At the lower end is the platinum loop for illumination, covered by a crystal window; near this the prism for refraction of the rays, and the opening of the air-tube. Between the middle and lower thirds, the tube is slightly bent, about 150 deg., and here again there is a prism. The stomach is first washed out, then inflated by means of the instrument; the patient is slightly under the influence of morphia, but not under chloroform, and lies on the side, so as to allow the saliva to flow unhindered from the mouth. The instrument is passed by the side of the mouth and larynx, not in the middle. For the stomach, two instruments are necessary, viz., one for the cardiac, the other for the pyloric end.

BENGER'S PEPTONISED FOODS.

We have received from Messrs. Mottershead and Co. of Manchester samples of Benger's peptonised or partially digested foods. These are, undoubtedly, a great advance on any previous attempt in this direction. The self-digestive farinaceous food consists of wheaten flour subjected to a preliminary process of cooking, and then impregnated with pancreatic extract. When the food is mixed with warm milk or warm milk and water, the digestive principles of the pancreatic extract fulfil their function, and convert the starchy matter of the food and the albuminoid matters, both of the flour and milk, into soluble products, which are readily absorbed. The food is made without the slightest difficulty. A tablespoonful should be mixed in a basin with four tablespoonfuls of cold milk, and to this should be added gradually, and with stirring, half a pint of boiling milk or milk and water. The process of

digestion commences at once, and will have considerably advanced by the time the food is sufficiently cool to be eaten. In cases where the digestive powers are much impaired, it may be desirable to allow the food to stand for half an hour or more, in order that the change may be complete. The process may be arrested at any moment by boiling. The food so prepared has no disagreeable taste, is palatable and excellent in every way. It is taken readily both by adults and children. We have given it in very many cases of acute dyspepsia, gastric ulcer, and the vomiting of the later stages of phthisis, with the most marked benefit, patients frequently retaining it after every other food had been rejected. For children who throw up their milk in curdled masses it is invaluable.

Of Benger's Peptonised Beef-Jelly we can speak in equally positive terms. It may be regarded as a concentrated beef-tea, containing a large proportion of beef-fibre in the peptonised form. It is best taken alone, a teaspoonful or more at a time, but is frequently used to 'fortify' beef-tea or soups. We have found it invaluable for old people whose digestive powers are feeble, and also in convalescence from acute diseases. The introduction of these preparations is a distinct advance in therapeutics.

MISCELLANY.

THE Göttingen Royal Society of Sciences offers, in the physical class, a prize of 50 ducats (£23) for the best investigation, with accurate experiments, of the chlorides and amides of cyanogen (the present data regarding these compounds being rather uncertain). Papers must be sent in before the end of September 1884.

A COMMISSION has been appointed in Paris composed of MM. Wurtz, Berthelot, and other influential men of science connected with politics, to establish a superior School of Chemistry of Physics. The course of instruction will occupy three years. It is stated that M. Cochéry will devote to this institution the surplus of the International Exhibition of Electricity.

At a recent meeting of the Trustees of the Lewes Studentship in Physiology, which was founded by the late 'George Eliot', in memory of her husband, Mr. George Henry Lewes, the vacancy occasioned by the appointment of Dr. Roy to the Brown Professorship of Pathology in the University of London was filled up, according to the terms of the Trust, by the election of Mr. L. C. Wooldridge, D.Sc. Lond. Dr. Wooldridge is a former student of Guy's Hospital, who has lately been working in Professor Ludwig's laboratory at Leipzig. He has already made investigations of importance, one of which, on the part taken by the white corpuscles in the coagulation of the blood, has been read before the Royal Society. The studentship is for three years, and its conditions provide for the holder devoting himself during that time to physiological researches.

A NEW OPHTHALMOLOGICAL MAGAZINE. — A new French monthly magazine, the *Revue Générale Ophthalmologique*, is announced from the well-known house of G. Masson, Paris. The review is under the direction of Professor Dor of Lyons and Dr. Meyer of Paris, assisted by Dr. Carreras Arago of Barcelona, Dr. Magnus of Breslau, Dr. Manfredi of Modena, Dr. Shenkl of Prague, and Mr. Swanzy of Dublin. A prominent feature will be a copious bibliography of ophthalmological literature, and a critical analysis of all publications relating to ophthalmology; Dr. Meyer is entrusted with the review and analysis of all French works, and Professor Dor with the same functions in regard to the ophthalmological literature of other countries.

ADMISSION OF FEMALE PHYSICIANS TO MEDICAL SOCIETIES. — The Philadelphia correspondent of the *Boston Medical Journal* writes: The momentous question which for some time had been agitating the County Medical Society, was finally set at rest by a formal vote. On the notices for the stated quarterly meeting held October 19, 1881, it was stated that the question of the eligibility of women practitioners of medicine for membership in the Society would come up for discussion, having, by a resolution passed at a previous meeting, been made the special order of business for this meeting. In consequence of the general notice, a large attendance was secured. When the matter came fully before the meeting, it was found that no organised opposition existed, and the matter was decided, almost without a dissenting voice, by the adoption of a resolution declaring that it was the sense of the Society that women practitioners are eligible to membership 'under the same laws and regulations governing the admission of men'. This important step was taken simply as an act of justice, and not without full consideration of the question. The traditions of the Society and the feelings of many of the members were, apparently, so opposed to it, that hitherto the Board of Censors felt unable to endorse female candidates, but *nous avons changé tout cela*, and the names of several women practitioners have already been presented and recommended for membership in the Society. Another reporter observes that, at the last annual meeting of the Gynæcological Society (one of the most valuable and important societies of the United States, and second to none of the same speciality), several ladies were present, of whom one, Dr. Mary Putnam Jacobi, took an interesting and useful part in the proceedings. Dr. Mary Putnam Jacobi occupies already a position in practice in the best medical societies in New York.

AMERICAN MEDICAL WIT. — The *New York Med. Record* of December 3, 1881, publishes the following amusing characterisation of various sections of the American medical profession, under the title of 'A Medical Song from "Patience".'

- A New York medical man,
A very much advertised man,
A pills-in-variety, talk-in-Society,
Each-for-himself young man
- A Philadelphia man,
An *Index Medicus* man,
A think-it-all-gammon, this talk of Buchanan,
Great-medical-centre young man.
- A Boston medical man,
A hyper-historical man,
An ultra-permission toward medical women,
A Harvard-or-nothing young man.
- A Chicago medical man,
A wide-awake, ethical man,
A good-as-the-rest-of-you, more-than-abreast-of-you,
Down-on-the-East young man.

THE ORDEAL POISON OF THE GABOONESE. — The ordeal poison used by the Gaboonese, and called by them 'm'boundu' or 'icaja', has been the subject of several investigations. Messrs. Rabateau and Peyre (*Pharm. Jour.*, ser. 3, vol. 1) found that the active principle or principles produced effects presenting a certain analogy to those caused by strychnia, but, in other respects, rather resembling the action of brucine; whilst M. Testut affirmed the presence in the bark of two alkaloids, one exercising a convulsive or tetanising action, the other a stupefying or anæsthetic effect. Messrs. Heckel and Schlagdenhauffen, as the result of some chemical and physiological experiments undertaken with a view of clearing up this point, now state (*Jour. de Pharm. et Chim.*, Jan., p. 32), that strychnia is the sole alkaloid and active principle. The alkaloid was found in the root-bark, stem-bark, and leaves, but especially in the cells of the cambium and liber; only traces were found in the medullary rays. The authors are also of opinion that the distinction that has been drawn between the physiological actions of Asiatic and American species of *Strychnos* has no real foundation, the paralytic action being produced by larger quantities of the active principle than the tetanising action. This agrees with the opinion of M. Delaunay as to the action of strychnia.

The London Medical Record.

REICHERT AND TUCKER ON POISONING BY ACONITE.

DR. EDWARD T. REICHERT (*Philadelphia Med. Times*, Nov. 19, 1881, p. 105) summarises forty-one cases of aconite-poisoning, to which is added an appendix of an analysis by Tucker of fifty-three cases. Of the 41 cases, 28 recovered and 13 died. One died in 30 minutes, one in $1\frac{3}{4}$ hours, one in $2\frac{1}{4}$ hours, two in 3 hours, one in $3\frac{1}{2}$ hours, one in 4 hours, two in 5 hours, one in $5\frac{1}{2}$ hours, and in three cases the time was not recorded. The average time of the occurrence of death from the time of the ingestion of the poison was $3\frac{1}{4}$ hours. Symptoms appeared in seven cases immediately, in eight within half an hour, in seven within 1 hour, in two in $1\frac{1}{2}$ hours, in four in 3 hours, in one in $3\frac{1}{2}$ hours; the time is not stated in thirteen.

Difficulty of swallowing appeared in 8, of articulation in 5; articulation remained perfect in 1; salivation occurred in 1, increase of the secretions generally in 1, lacrymation in 2, dryness of the throat in 3, intense thirst in 4, constriction of the throat in 1, choking sensation in 1, retching in 5, nausea in 3, vomiting in 17. The matters vomited smelt of camphor in 1, of alcohol in 1, of aconite in 1. The matters vomited had the appearance of a fluid resembling gravy with stringy mucus in 1, a dark grumous liquid in 2; they were bilious in 2, mucous in 2. There was purging in 6, involuntary defecation in 2, tympanites in 1, diuresis in 1; frothy saliva was spat up in 3. Pain was great in 3, in the stomach in 9, severe in 3, general lancinating in 1, around the waist in 1, down the spine in 2, in the head in 3. There was a burning sensation in the stomach and bowels in 6, in the tongue and fauces in 6. Vertigo occurred in 6, tremulousness in 2, a comatose condition in 1, stupor in 1. Consciousness remained perfect in 11, consciousness was lost in 5, consciousness was lost for a few seconds at a time or at intervals in 3. Sensibility was diminished in 3; numbness was general in 10, in the tongue in 6, in the extremities in 5, in the back in 1, in the face in 5, in the arms and hands in 4. There was tingling in 15, pricking in a few, sensation of some parts of the body being swelled in 3, tinnitus aurium in 1, impaired sense of hearing in 1, desire to sleep in 8, delirium in 3, semidelirium in 2, groaning in 1, sighing in 1, faintness in 7, attacks of depression in 2, great depression in 10, restlessness in 8, rigors in 1, aphonia in 1.

Convulsions were tetanic in 1, general in 3, slight in 2, facial in 5; convulsive movements were present in 8. Trismus occurred in 2. There was paralysis of the lower jaw in 1, of the lower extremities in 1; the hands were clenched in 1, there was staggering in 4, muscular inertia or relaxation in 11, collapse in 8. Respiration was laboured in 8, slow in 5, short and hurried in 2, quiet and regular in 2, dyspnoic in 1, hurried and laboured in 1, slightly stertorous in 1, quick and sighing in 1. The pulse was feeble or imperceptible in 11, slow and feeble in 9, slow, feeble, and irregular in 7, feeble and irregular in 5, slow in 1, rapid and tumultuous in 1, rapid, feeble,

and irregular in 1, slow, followed by frequency and irregularity, in 1. Temperature was lowered in 3, diminution was followed by a rise in 1. The pupils were dilated in 17, slightly contracted in 1, alternately contracted and dilated in 1, not dilated in 1, insensible to light in 3; there was amblyopia in 5, diplopia in 1; the conjunctiva was injected in 1, the eyes were staring in 2, fixed and sparkling in 2, fixed, sparkling and brilliant in 2; lacrymation occurred in 2. Perspiration was profuse in 2, cold and clammy in 18; there was coldness of the extremities in 14, general in 4, along the spine in 1. Lividity was present in 3. The countenance was pale in 12, anxious in 3, pinched in 2, livid in 2, flushed in 2, hypochondriacal in 1, depressed in 1, heavy in 1, dusky in 1, expressive of agony in 2, calm in 1, haggard in 1, shrunk in 1, expressionless in 1.

Among the symptoms of aconite-poisoning not particularly specified in the above analysis are many that are either curious or of special interest. In some of the cases there was very marked jactitation, the head being constantly tossed about, or some portion of the body being kept constantly moving, or the patients constantly throwing themselves about violently, etc. The eyes in one case were described as feeling as if they would drop out; in others, certain portions of the body felt as if swollen, and even many times the natural size, the head especially being complained of. In one instance a sensation of tightness across the eyes and nose was present, with a feeling in the head as if distorted by the pressure of a vice. Heaviness of the feet and legs, in all probability similar to the sensation which occurs in haschisch and certain other forms of poisoning, was also noted; and in one case the sensation was described as though the legs were going away from the patient. In another case the teeth felt as if loose; and in another, peculiar sensations about the roots of the teeth, appearing two days after the injection of the poison, were noted. Aphonia continued in one case for over two weeks. Delightful dreams in several cases are recorded, and in one the dream was said to be 'horrid'. An hysterical condition was developed in one, and in another a peculiar cry was now and then uttered. A dreadful sensation in the pit of the stomach has also been recorded. In several cases, the great danger of raising the patient from the recumbent position was forcibly illustrated in the alarming symptoms, and even fatal results, which followed such indiscretion. The respiration and pulse were sometimes reduced to an extraordinary degree, the former to five or six a minute, and the latter as low as twenty a minute, and the patient recovered. In one case the temperature was lowered 14.2 deg. Fahr. (!) below the normal, and the patient recovered.

An analysis of 12 necropsies gave the following results. The face and skin were pale in 2. Rigor was well marked in 5, no rigor in the upper extremities in 1; there was general flaccidity of muscles in 1, erection of the penis and ejection of seminal fluid in 1. The heart was normal in 1, empty in 1, flaccid in 2; the right ventricle was flaccid in 2, nearly empty in 1, contained blood in 3, was distended with blood in 4; the left ventricle contained blood in 2, was empty in 3, full in 1, contracted in 5, firmly in 2; the blood was dark and fluid in 6, slightly coagulated in 1; there were loose black clots in the heart in 1. The lungs were emphysematous in 2, infiltrated in 2; the lower lobes were congested in 1; the dependent parts were congested in 2, the dependent

portions were somewhat œdematous in 1; the lungs were healthy in 1, slightly congested in 1, contained sero-sanguinolent fluid in 1, were black over the entire structure in 1, friable without induration in 1; the mucous surface of the bronchi was congested in 1; the pleura was healthy in 1. In the brain, the vessels did not appear congested in 3; the vessels were full of blood in 2, the vessels of the dura mater were congested in 3, natural in 1; the membrane was adherent in 1; the arachnoid contained a large quantity of fluid in 1, a slightly excessive amount of fluid in 1, a normal amount of fluid in 3; it was congested in 1; the brain-substance was congested in 1; normal in 8. The tongue was redder than natural in 1; the pharynx and fauces were slightly congested in 1, of a violet tinge in 1; the œsophagus was congested in 3, having a violet tinge in 1. The stomach was empty in 1; it contained grumous fluid in 2, blood and mucus in 2, a brownish fluid in 1, a viscid reddish fluid in 3, a grey thick fluid in 1; the surface of the mucous membrane was congested and sometimes noted as possessing a bright scarlet hue in 7; it was softened in 2, highly congested in 3, there were patches of congestion in 3; the surface had a chocolate colour in 1, there were reddish-brown patches at the cardia in 1, the action was confined principally to the cardiac end or greater curvature in 5, there was ecchymosis in 5. In the duodenum, the mucous membrane had a scarlet or pale rose colour in 3, was congested in 3, ecchymotic in 1, the duodenum contained a reddish fluid in 3. The small intestine had a bright scarlet colour in the upper portion, which gradually became darker, blackish or brownish, as the jejunum was reached, in 2. The spleen was congested in 3. The liver was congested in 2, healthy in 1, enlarged in 1, the borders were coloured dark brown in 1. The kidneys were congested in 3, intensely congested in 1, rather softer than usual in 1. The viscera were healthy in 1, generally congested in 1.

Treatment.—The general plan of treatment pursued in a vast majority of the cases was the evacuation of the stomach, the administration of stimulants in liberal amounts, and the application of external stimuli.

Opium or its preparations were used in four cases, all of which terminated favourably. In one case, the quantity administered is not stated; in one, half grain doses of sulphate of morphia were given; in another, three hypodermic injections of fifteen minims each were practised in a short time; in the fourth case, five and a half drachms of laudanum were administered in four hours, without inducing any symptoms of narcotism.

Digitalis was administered in connection with other stimulants, in two cases. One died. The one which recovered, and which had taken an ounce of Fleming's tincture, was given three hypodermic injections of twenty minims each within an hour.

Amyl-nitrite was used in one case with immediate relief to the spasms; the pulse became stronger, and the deadly pallor of the face disappeared. This substance is a powerful cardiac stimulant, and promises such good results in this form of poisoning as to deserve a fair and extended trial. Tincture of nux vomica was used in one case in three-drop doses every twenty minutes, and, as the practitioner stated, with marked benefit to the heart and respiration. Strychnia has also been employed.

The following is an analysis of 53 cases made by Tucker. There were 47 adults; 6 children. Males

24; females 12; sex unknown, 17. Four each took three drachms of the root; two recovered, two died. One took one and one half roots, and died. One took a half of a root, and recovered. Two each took a small piece of a root; one recovered, one died. Three took an unknown quantity of the root; all died. Six took a quantity of the leaves; three recovered, three died. One took the leaves and flowers, and died. Twelve each took two and a half ounces of the fresh juice; nine recovered, three died. Two each took one-half ounce of the saturated tincture; one recovered, one died. One took one-half ounce of the tincture of the root, and died. One took a mouthful of the tincture, and recovered. One took fifteen minims of the strong tincture, and recovered. One took one and one-half ounces of the tincture (Paris Codex) and recovered. Three each took one ounce of tincture of the root, one recovered, two died. One took twenty-five minims in twenty minims of tincture of belladonna and one drachm of tincture of musk, and died. Two each took one drachm of the saturated tincture; both recovered. Five took an unspecified amount of the tincture of the root; two recovered, three died. One took two ounces of the decoction, and died. Three each took five grains of the fresh extract; two recovered, one died. One took two and one-half grains of aconitine, and recovered. One took eighty minims of the tincture in ten doses, and died. One took an ounce of Fleming's tincture, and died.

The recoveries were 27; the deaths 25. Two died in a short time; one in one and one-quarter hours, eight in two hours; one in two and one-quarter hours; one in two and one-half hours; four in three hours; one in a few hours; one in five hours; one in seven hours; one in six days.

Symptoms occurred in three immediately, all recovered; shortly after taking the poison in ten, of whom five recovered, five died; in a quarter of an hour in four, of whom three recovered, one died; in two hours in one, who died. No time was given in 34 cases. Tingling and pricking or burning sensations occurred in 26; not mentioned in 27. Vomiting was present in 28, early in 20, not until emetics were given in 5; there was no emesis, except by emetics in 8; vomiting was violent in 11, copious in 4, slight in 1; the matter ejected was green, livid, and bilious in 13; there was no nausea in 1. Diarrhœa occurred in a few; purging in 12. The pupils were dilated in 18 (early in 15, late in 3); contracted in 2 (both early); natural in 1; the condition is not stated in 31. There was restlessness in 16. The surface was cold and sweating in 30. Respiration was short, hurried, and laboured in 20; stertorous in 1; not noticed in 31. There were severe pains in the abdomen in 19; a copious flow of saliva occurred in 1; dysphagia in 3; inability to walk in 3; vision was dim in 5; there was total blindness in 1; almost blind 1. The intellect was entire in 12; there was stupor or unconsciousness in 5; not mentioned 35; paralysis occurred in 3; there was no paralysis of either sensation or motion in 1; idiotic, 1; apoplectic, 1; speechless, 1; there was difficulty of articulation in 1; speech was thick in 1; there was staggering in 2; general convulsions in 7; trismus in 4; twitchings of the facial muscles in 1; excessive tremblings in 1; tremors in 3; cramps in 14; shivering in 2; great weakness in 15; headache and vertigo in 14 (slight in 1, violent in 13); delirium in 4 (slight in 2, violent in 2); occasional incoherence in 2; no delirium or sleeplessness in 2. The pulse was

frequent, weak, and often imperceptible in 16; slow and irregular in 4. The lips were blue in 2; the countenance was livid in 1; the nails were livid in 12. There was foaming at the mouth in 2; a sense of swelling of the tongue or face in 13; of the limbs in 1. The hands were clenched in 2. There was syncope in 3; tenderness of the epigastrium in 7. The eyes were glaring and protruded in 1; fixed in 1.

An analysis of eleven necropsies showed that the lungs were congested in 7; the vessels of the brain were engorged in 5; the vessels of the pia mater were highly congested in 3. The mucous membrane of the stomach was red in 6; there were patches of dark colour on its surface in 3. The intestines were congested in patches or otherwise in 6. The rectum and œsophagus were very red in 3. There was serous effusion under the arachnoid in 4, at the base of the brain in 3; the abdomen was swollen in 2; the bowels were filled with air in 2; The stomach was empty in 2; contained grey coloured liquid in small quantity in 3; was filled with gas in 3; the right side of the heart was filled with dark blood in 1. The liver, spleen, and kidneys were engorged in 1; healthy in 1. The blood was unusually fluid in 1. T. STEVENSON, M.D.

SOUBBOTINE ON THE APPRECIATION OF THE INFECTIOUS QUALITY OF MICROPHYTES,

AND THEIR PROPAGATION IN THE ORGANISM.*

IT is not to be disputed that the virulent substances which produce infectious affections or pyæmia, in patients with open sores, enter the organism by the sore itself. Whether they develop in the wound, or enter already developed, is a question to decide.

In the two hypotheses, they are slowly introduced in small quantities in accordance with the laws of absorption. A wound with two openings—a seton-wound—is best calculated to realise this progressive introduction. A skein of silk or of hemp, or a drainage-tube, is kept in the wound to prevent it from healing too quickly. The virulent substance is injected into the wound by means of a syringe; or the seton-thread, or drainage-tube, is moistened by it. The animals thus treated are killed at different periods. The propagation of bacteria in living tissues can thus be studied, also the changes they undergo.

In the examination of the liquids, a drop of pus or blood is placed on a glass-slide; the morphological elements are fixed by osmic or chromic acid by the following method. The section, either wet or dried, is kept for some minutes over the mouth of a bottle containing a few drops of osmic acid, in solution at 1 per 100. When chromic acid is used, a layer of the liquid under examination is placed on a glass-slide, and dried over a spirit-lamp, then immediately washed several times in a solution of chromic acid of 1 per 200, or 1 per 300. This is a method of M. Malassez, who uses it for other researches. After the hardening process the sections are washed in distilled water, and in a solution of aniline green and water of 1 per 1,000. Afterwards they are washed for twenty or forty minutes in distilled water, slightly acidulated, in order to remove the colour of the nucleoles of the cells. The protoplasmic granulations remain colourless. The sections are washed a second

time, with great care, in distilled water, then treated with a weak solution of picrocarminate of potash, again washed, and dried by exposure to air, or by pure alcohol, if it is necessary. When bacteria are present, they are easily distinguished—they are coloured green; the serum of the pus is slightly green; dead white spots indicate the former presence of bacteria, which have been carried away by the washing.

Small fragments of tissues taken, for instance, from the walls of an abscess of a rabbit just killed, are macerated for twenty-four hours in a solution of osmic acid of 1 in 300; they are immediately treated by ordinary alcohol; after an interval of twenty-four or twenty-eight hours, they are sufficiently compact for making sections. These sections are treated in the same way as the liquids after they are hardened, but it is more difficult to determine the time necessary for the reagents to act. The bacteria are easily distinguished, either when isolated or in groups. If the fragments of tissue have not been macerated eight days in alcohol, they must be treated with distilled water, acidulated by acetic acid, otherwise there will be a deposit. For colouring spherical bacteria, M. Soubbotine prefers green methylene to any other aniline. It is indispensable that the granulations, which are always present in the cells of healthy tissues, should be carefully studied before these examinations are made, otherwise it will be difficult to avoid errors.

W. VIGNAL.

DUMONT-PALLIER AND CHARCOT ON HYSTERIA AND HYPNOTISM.

M. DUMONT-PALLIER has communicated to the Biological Society of Paris the results of his clinical observations and experiments on the hysterical patients in his wards. By means of a current of air proceeding from a pair of bellows, he causes the contractions which follow an attack of hysteria to disappear. In the case of a patient attacked by melancholia, hypnotism, brought on after an hysterical attack by looking fixedly at the patient, modified considerably her mental condition, and she remained seven days free from the recurrence of an attack of depression.

M. Dumont-pallier has assured himself by means of Drummond's light, transmitted across a crystal prism, that the extra reds and violets of the spectrum exercise an action on the surface of the skin, which action determines muscular contraction. Sound produced at a distance, and transmitted by means of an India-rubber tube to the surface of the skin of an hysterical patient when hypnotised, determines muscular contractions. When the ticking of a watch is transmitted by this method, the muscular contractions are synchronous with the watch; if the watch be removed, the muscular contractions cease. Similar experiments were made with the telephone and microphone; very slight vibrations of these instruments were sufficient to induce muscular contraction. These contractions became more marked when the operator looked fixedly at the plate, or when a luminous ray was thrown on to it.

At a meeting of the Biological Society on Jan. 14, M. Dumont-pallier described the phenomena resulting from the action of a current of air, created by a pair of bellows, and directed this time towards different regions of the scalp during the hypnotic cataleptic sleep in hysteria; also the phenomena consequent on irritating by the prick of a pin the different regions of the scalp corresponding to the cortical

* Laboratoire d'Histologie du Collège de France. *Travaux de l'Année 1881.* Paris: Masson.

regions of the brain described as motor. M. Charcot's communications induced M. Dumontpallier to make these experiments, because he considered it must be difficult to localise within a given limit of the surface of the cranium and the cerebral mass, the action of an electric current of from four to ten of Leclanché's elements. On pricking with a pin the above-named cranial regions, there were movements of the arms and legs, rotation and flexion of the head. These movements differed according to the point of the scalp irritated. If the pin were kept in its place, and if, after two or three minutes it were pressed on, the limbs and head resumed their normal position. A prick on the opposite side of the cranium to that originally irritated had the same effect. These experiments were repeated fifty times in different patients; with uniform results.

The first series of experiments were made: 1, on the scalp of an hysterical patient whilst in the cataleptic period of hypnotism, and who, for several days, had recovered the sensibility of the scalp by the application of metallic plates to the middle of the forehead; 2, on a patient who, consequent on the application of a metal plate on a level with the left frontal protuberance, fell alternately into a cataleptic state and a state of contraction (*contracture*). The prick of a pin on the same side as that where the sensibility was maintained by means of a metal plate, was attended by crossed movements of the arms and legs. Pricking with a pin the insensible side of the scalp did not induce any movements of the limbs, which were thrown into a cataleptic state on opening the eye; a current of air created by a pair of bellows, and directed to the scalp insensible to a pin-prick, produced movements of the limbs, with rotation and flexion of the head.

In different periods of hypnotism it is possible to limit on the surface of the scalp a certain number of 'zones reflexogènes'; irritation of these zones determines movements in different parts of the body. Some of these zones seem to correspond by their position to the motor cortical region of the brain. Different physical agents produce the same results as those of a pin-prick, such as a feeble electric current, the magnet, heat, light, and sound.

M. Charcot remarks on M. Dumontpallier's communications as follows. The facts observed are indisputably very interesting, but it is impossible to assimilate them with the phenomena I described at a meeting of the Biological Society on Jan. 7. The facts I then communicated refer to the lethargic form, accompanied by nervo-muscular superexcitability; the patient whom M. Dumontpallier shows to the Society, does not present this condition. It is true that M. Dumontpallier's patients and mine are hysterical women in a state of hypnotism; but hypnotism comprises a series of varied nervous conditions; these different conditions must be clearly limited and defined; the lethargic state differs essentially from the cataleptic—the cataleptic from that called somnambulistic. The sudden movements produced by galvanic stimulus applied to the crania of hypnotised women, when in a lethargic state, are facts which differ entirely from those related by M. Dumontpallier; he admits this difference of phenomena, but asserts that both are of a reflex order. I do for the moment reserve an explanation. I do not deny that reflex action plays a part in the phenomena of neuro-muscular superexcitability; various communications made by me, some of which are published in the *Archives de Neurologie*, admit it.

W. VIGNAL.

PREYER ON THE COLOUR-SENSE AND TEMPERATURE-SENSE, WITH SPECIAL REFERENCE TO COLOUR-BLINDNESS.

PREYER combats the Young-Helmholtz theory without absolutely accepting that of Hering. Red- and green-blindness are incompatible with Young's hypothesis, and the phenomena found hitherto in unilateral colour-blindness also contradict it. The theory of Maxwell, again, which adopts blue instead of violet as the third primary colour, is unable to explain the facts of unilateral colour-blindness.

Although certainly many of the phenomena of colour-blindness are explained by Hering's theory, it fails in one part. Thus the definitions of brightness and saturation lead to a series of contradictions. The processes causing sensations of light and colour, also, cannot be considered independently of one another. In the medium grey, which, according to Hering, is composed of black and white, these are not seen. The perception of black is the sensation of retinal repose; it is not caused by a direct stimulation of retina, as grey, white, and the colours are.

According to Preyer's views, colour-perception has only two dimensions; it can vary in intensity and in quality. The greater or less intensity, or brightness of sensation, depends mainly on the amplitude of the stimulus; the quality depends on the frequency of the vibrations originating the stimulus. White, grey, and black constitute the only distinct differences in intensity; while red, yellow, green, and blue, alone constitute the different qualities of colour.

Every colour-sensation is the result of the amount of receptivity for the sensation of light, and of the quality and intensity of the sensation of light normally produced by stimulation of the nerve-endings of the retina by means of rays of light of a certain wave-length. Rays having a wave-length considerably greater than 546 millionths of a millimetre produce the sensation of a warm colour (*e.g.*, brown, red, yellowish red, yellow, yellowish green); and the rays of a wave-length considerably shorter than 546, produce the sensation of a cold colour (*e.g.*, greenish blue, green, blue, reddish blue). The spectrum, consequently, splits into a warm and a cold half. Between the two halves there are rays of medium wave-length, about 546, which correspond to the indifference-point for colour-temperature. This spot is the brightest in the spectrum, and with increased illumination is most readily converted into white. There are only two means of transition between the warm and the cold colours. The one is from the red to the blue through the yellow, the indifference-point, and the green; the other from the red to the blue directly, through the purple and violet.

The warm and cold colour-sensations differ essentially in character. Red and yellow are more nearly related than red and green; blue and green again are more nearly related than blue and yellow. The sensation of adjacent antagonistic colours is quite different from that of adjacent warm or cold colours.

According to Preyer, the colour-sense has developed from the temperature-sense, and is a temperature-sense highly differentiated and confined in its action to a highly sensitive nerve-expansion, the retina. The continually recurring series of colour-

sensations is analogous to the ever recurring temperature-sensations. The latter are dependent on sensations of contact, the former on those of brightness. Colour-blindness is produced by a displacement of the neutral point for colour-temperature, and corresponds to that imperfection of the temperature-sense which occurs when a considerable surface of skin is maintained continuously cooled or heated. Complete colour-blindness corresponds to an absence of thermal, with persistence of tactile, sensibility.

R. MARCUS GUNN.

MICHEL ON THE IRIS AND ON IRITIS.

J. MICHEL says (*Archiv für Ophthal.*, Band xxvii, No. 2, p. 171) that there is no longer any doubt that the anterior surface of the iris has an epithelioid covering. In the stroma of the iris are three kinds of cells: 1, spindle-shaped and star-shaped cells; 2, flat cells; 3, lymphoid cells. The iris is enclosed between two bounding membranes, viz., anteriorly, a delicate epithelial layer, which extends from the ciliary attachment of the iris to its pupillary border; posteriorly, a membrane composed of definite cell-elements, which carries on its hinder surface a layer of pigment. Between these two bounding membranes are two internal layers: (a), the reticular layer, composed of anastomosing cells, with interspersed lymph-corpuscles, not unlike the reticular structure of a lymphatic gland; and (b), the vascular layer, composed of trabeculæ of connective tissue, which carry vessels and nerves. These trabeculæ have a radial arrangement on the whole. On them are seen lying flat cells, either isolated or in groups. The structure of this vascular layer of the iris is not unlike 'the cavernous beam-work' which Sattler has described in the choroid of birds.

At the position of the sphincter pupillæ all the above layers are represented, but the reticular and vascular layer are much diminished in thickness. The development of the sphincter-part of the iris takes place very early in foetal life; that of the ciliary part begins about the end of the sixth month.

The pupillary membrane is a thin lamina provided with nuclei, epithelial cells, and vessels. The iris develops behind this membrane. At the disruption of the membrane, which takes place in a peculiar manner about the seventh month, its remains constitute the epithelioid covering of the anterior surface of the iris. Early in foetal life, there are, at the posterior surface of the iris, three layers, in the following order, from behind forwards: (a), pars ciliaris retinæ; (b), pigment-layer; (c), the bounding membrane. Of these, the pars ciliaris becomes pigmented, and coalesces with b. At no period of foetal life are elements to be seen on any part of the posterior boundary of the iris which can be regarded as unstriped muscular fibres.

In *acute iritis* excited in rabbits by the injection of $\frac{1}{4}$ to $\frac{1}{2}$ per cent. solution of nitrate of silver into the anterior chamber, there are found, microscopically, upraising of the epithelioid covering of the anterior surface of the iris by a fibro-purulent deposit beneath it, fibro-purulent masses in the anterior chamber, general swelling of the iris, extravasations, and occlusion of the pupil. After infection of rabbits with tubercle, the epithelioid covering of the iris is found raised by tubercles; there is general proliferation of the epithelioid elements of the iris, and de-

position of tubercles in the ciliary processes. Human irides were examined after removal by iridectomy, with the following results.

1. In *acute purulent iritis*, there are found detachment of the epithelioid covering of the anterior surface of the iris, with laceration and curling up of this membrane; extensive fibrino-purulent effusion into the anterior and posterior chambers, in the pupillary area, and between the epithelioid and reticular layers of the iris, and extravasations into its tissue; partial plugging of the arteries by fibrinous masses (in metastatic cases, thrombi containing bacteria), general infiltration and swelling. These results correspond closely with those mentioned above, obtained in artificially excited iritis in rabbits.

2. *Chronic Inflammation of the Iris*.—Syphilitic iritis is to be regarded as primarily an endarteritis of the small vessels; there is, secondarily, formation of nodules (gummata); later, there is a general proliferation of epithelioid elements throughout the tissue of the iris. These nodules are frequently invisible to the naked eye.

In tubercular iritis, also, nodules are found. Here they are seated on the vessels at one side, not embracing them, as in the syphilitic form; they are composed of epithelioid elements, which, at the periphery of the nodule, have a concentric arrangement; near the centre, a radial one.

In leucæmic iritis there are nodules between the posterior bounding membrane of the iris and the vascular layer. They consist of lymphoid and epithelioid elements, without discernible intercellular substance. The posterior bounding membrane itself shows an increased number of oval nuclei, and a thickening of the pigment-layer; in some of the nodules, a new formation of vessels takes place. The vessels of the iris generally have their circumvascular sheaths distended with lymphoid cells.

In chronic iritis, secondary to keratitis punctata, there is a great increase of lymphoid cells in the vascular sheaths and tissues of the iris in general. The pressure upon the vessels, caused by this increased number of cells, and consequent congestion, possibly accounts for the visible vessels on the iris during life in this disease.

In cyclitis after wounds or operations, are found changes in the endothelial covering of the iris, proliferation of nuclei in, and hyaline thickening of, this membrane, and occasionally upheaving of it by extravasation. The iris is infiltrated with round cells, and there are groups of wandering cells in the neighbourhood of the vessels. The vessels show an increase in the connective tissue of the adventitia, and a proliferation of the cells of the intima. The posterior chamber is filled with granulation tissue, which extends over the pupillary arcs. The thickened vessels do not show the amyloid reaction.

In a case of 'pseudo-leukæmia', the changes were found in the reticular layer of the iris; here there were nodules composed of spindle-cells, and newly formed lymphoid and epithelioid elements.

3. In primary glaucoma are found extravasations, extreme congestion of veins, especially in the sphincter part of the iris, and a general increase of lymphoid cells in the vascular layer. Possibly this collection of cells in the sphincter part may oppose some obstacle to the action of the sphincter, and so account for its loss of function in glaucoma. [This may be compared with Dr. Brailey's observation that the inflammation in the ciliary body in the early stage of glaucoma is principally in and around

the fibres of the ciliary muscle.—*Ophth. Hosp. Rep.*, vol. x, part 2, p. 282.—*Rep.*]

4. In secondary glaucoma there are adhesion of the periphery of the iris with the cornea, thickening of the whole anterior surface of the iris, and new formation of vessels under the epithelium; the posterior bounding membrane is sometimes thrown into folds, and the pupillary margin is in a state of ectropion. This condition may be explained in the following way. From the place of adhesion of the periphery of the iris to the cornea, a centrifugal pull is exerted on the iris; this causes mydriasis, throws the iris into folds, brings about ectropion of the pupillary margin, and at the place where this ectropion takes place, tends to bring the posterior surface of the iris into contact with the anterior lens capsule, and so cause posterior synechia. This latter result will ensue all the more easily, as in some cases of increased tension, the lens is nearer the posterior surface of the iris than usual. [The author appears to imagine that the 'centrifugal pull' causes an arching of the iris with the concavity forwards, just as the contraction of scar-tissue in the skin of the eyelid causes arching of the lid and ectropion. Even if it be conceded that such a pull is exerted on the iris, it is very doubtful if it would have the arching effect here attributed to it. A large series of specimens in the Moorfields Museum, which the reporter has had the opportunity of examining by the kindness of Dr. Brailey, show no trace of any such arching.—*Rep.*]

5. In prolapse of the iris its tissues undergo the same changes as in secondary glaucoma; in extreme cases, nothing is left of the iris but a thickened epithelioid layer and pigment.

6. In congenital buphthalmos the thickness of the iris is much reduced. Its ciliary part undergoes a change of position through the adhesion of the posterior surface of the iris to the underlying ciliary processes; this causes a retraction of the periphery of the iris, and a distinct bending of the vessels.

W. H. CHARNLEY, M.D.

GALEZOWSKI AND DESPAGNET ON CLINICAL STATISTICS FOR THE YEAR ENDING JULY 1881.

DR. DESPAGNET (*Recueil d'Ophthalmol.*, Dec. 1881) gives a careful statistical and analytical account of the cases which presented themselves for treatment at Dr. Galezowski's Eye-Clinique during the year ending July 1881.

From this paper, a few of the most important observations may be selected. A good example of that rare disease, calcareous degeneration of the cornea, was met with only once, but a similar case had already been seen and described by Dr. Galezowski in 1878, and by Bowman before him. The affection is due to infiltration and calcification of the epithelium, the process being strictly limited to that layer of the cornea. Abrasion was followed by cure.

In scleritis, besides constitutional treatment, Dr. Galezowski strongly advocates iridectomy whenever symptoms of kerato-iritis begin to show themselves. He gives details of fifteen cases, in which very favourable results followed the operation.

In wounds of the sclerotic, the practice of placing a suture is strongly advocated. One case is mentioned in which an incised wound (11 millimètres), five lines in length in the superior half of the globe, was thus brought together with perfect success,

although the vitreous humour was escaping, and the ciliary zone had evidently been wounded. Vision was restored to the extent of a quarter. In wounds, however, of the sclerotic and cornea, whether complicated with hernia of the iris or not, the above practice is condemned, having as yet, in six cases, given no satisfactory results.

In specific iritis, Dr. Galezowski strongly advocates constitutional treatment by hypodermic injection of albuminate of mercury. Within the last eighteen months he has administered nearly 2,000 injections of this salt, without a single untoward accident. This result he attributes partly to the fact of the careful manner in which his formula was dispensed (directions given), but still more to the fact that the needle was always passed deeply into the subcutaneous tissue, or even beneath the fascia, but not into the skin. He claims for this method of administering mercury in such cases, rapidity, efficacy, and less constitutional disturbance than by any other with which he is acquainted. He records three cases of gonorrhœal iritis. One occurred in a youth who, at the same time, was suffering from gonorrhœal rheumatism of the knee of the opposite side. Dr. Galezowski believes that in this case the iritis was essentially of rheumatic origin, and was more acute and intense, because the rheumatism was specific. He also mentions a case of spontaneous mydriasis, traced to reflex irritation from a carious tooth.

In the *Recueil d'Ophth.* for March 1882, Dr. Despagnet calls attention to a new form of eye-speculum. It is much of the same size and shape as Von Gräfe's, but has a hinge in the centre of either branch which enables the portion projecting beyond the orbit to be laid back on the temple, out of the operator's way.

In trichiasis, Dr. Galezowski, we learn, makes very extensive use of the thermo-cautery. He applies this, at intervals, along the base of the lashes. According to the depth at which the heat is applied the resulting eversion can be increased or diminished.

In the treatment of 'organic entropion', complicated with blepharophimosis, both lids being involved, his routine practice is to enlarge the palpebral opening; where, however, only one lid is engaged, he adopts a different method. In these latter cases he makes a more or less deep cauterisation at the distance of about 3 millimètres from the palpebral margin. The eschars, as they contract, seldom fail to replace the margin in its proper position.

In ectropion, he has largely adopted Verneuil's operation of blepharoraphy, and allows the lids to remain sewn together for six, ten, or twelve months, until all tendency to contract has ceased. For sutures, Dr. Galezowski prefers very fine gold wire to any other material.

For the treatment of old standing granulation, excision of the conjunctival *cul-de-sac* is recommended.

One case of xerosis, in which, also, the lower lid was adherent to the globe, was cured by a graft of conjunctiva from a rabbit. The flap transplanted measured 15 millimètres each way, and was attached by four superficial sutures and two deep ones. Since the operation, the new conjunctiva secretes sufficient moisture to render all the movements of the globe easy and painless.

Out of eight cases of tenotomy for divergent strabismus, Dr. Galezowski has, in seven, performed advancement of the internal rectus, in preference to division of the externus. In tenotomy of the inter-

nus for convergent strabismus he recommends that the conjunctival wound should always be horizontal instead of vertical, to avoid the effects of cicatricial contraction. He also advocates dividing the muscle itself as it passes over the hook, instead of merely dividing its aponeurotic attachments. He alleges that, by this means, he obtains greater effect, while at the same time he has had no reason to fear any complete retraction of the muscle. He cites several cases, some of which have been more than a year under observation, in support of his proposition.

As to the operation of sclerotomy, Dr. Galezowski would limit its application entirely to cases of simple and hæmorrhagic glaucoma. He figures a sclerotomy with bent blade and double edge, with which, instead of one long section, he makes four in the form of a cross. The object of this is to avoid as far as possible hernia of the iris, with consequent incarceration in the wound. Optico-ciliary neurotomy he condemns very strongly, having in three cases in which he tried it obtained bad results.

Dr. Galezowski enters at considerable length into the subject of the intraocular division of synechiæ, an operation to which he gives the name of 'synechotomy'. He recommends it (1) in cases where anterior synechiæ, caused by wounds and limited in extent, exist; (2) in anterior synechiæ following an operation for conical cornea; and (3) in the case of a partial staphyloma adherent to the cornea, and due to perforation of that membrane. He uses, as a rule, a curved knife made for the purpose, but makes no mention either of Streatfeild's operation, or of the spatula recommended by that surgeon.

The article closes with statistics of two hundred and fifty-two cataract operations. From these we learn that Dr. Galezowski has abandoned his previous practice of downward sections of the cornea, making them always now, except under peculiar circumstances, upwards.

LITTON FORBES.

BARDELEBEN ON POPLITEAL ANEURISM.

PROFESSOR BARDELEBEN reports, in the *Berl. Klin. Woch.*, No. 1. 1882, a case of popliteal aneurism, and adds some remarks of interest on the treatment of the affection, which seems to be of much less frequent occurrence in Prussia than in this country. The subject of this case was a working tailor, aged 46, who complained, for the first time, of pain and stiffness behind the right knee, in May 1880. One month later, he noticed pulsation in this region, and four months later observed a distinct tumour. At the end of the year he came, as a hospital patient, under the care of Professor Bardeleben. There was then seen in the right popliteal space an elastic pulsating tumour of the size of a man's fist, which diminished in size and ceased pulsating on compression of the femoral artery. No history of injury could be made out. The patient seemed to have been quite free from syphilitic disease and from rheumatism; the heart was clearly quite normal, and no indications of vascular disease were presented by the radial, temporal, or posterior tibial arteries. The tumour was attributed by the man himself to his habit of always standing when at work.

In the treatment of this case, the affected limb was first fully flexed at the hip and knee, and occasional digital compression was applied to the femoral artery. This plan was kept up for four days, during most of which period the pulsation in the aneurism

was arrested, but had to be discontinued in consequence of much œdema in the foot and leg, and also of sloughing over the heel. The next attempt consisted in applying instrumental compression to the femoral artery. The vessel was readily controlled by pressure of this kind without any complaint from the patient of pain or even uneasiness, but in the course of twenty-four hours gave rise to sloughing of the skin. This result followed the application of a tourniquet first below Poupert's ligament, secondly, above this ligament, and again in the middle third of the thigh. A subsequent attempt to treat the aneurism by the application of an elastic bandage to the limb, and of Esmarch's ligature above the knee, caused much pain, and was followed by sloughing of the skin over the instep, and also by a sudden attack of peculiar mental and nervous disturbance, in which the patient attempted to commit suicide. As it was found that pressure invariably caused sloughing, and as no progress had hitherto been made towards cure of the aneurism, Professor Bardeleben decided on applying a ligature to the femoral artery on Scarpa's triangle. The material employed for this ligature was carbolised catgut, and the operation was performed under strict antiseptic conditions. The wound was dressed antiseptically, and, notwithstanding the proximity of the sloughing sores that had been caused by compression, it healed in the course of eleven days, without the discharge of a single drop of pus. The patient made a speedy recovery, without fever or any other bad symptom; and, although on the third day a large pulsating vessel was observed on the inner side of the knee, and the temperature of the limb during the first two days after the operation did not fall, but rather increased, the aneurismal tumour became hard and small, and soon disappeared, without any return of pulsation. It was noticed, very soon after the application of the ligature, that, whilst the inner side of the thigh had become anæsthetic, the outer side preserved its sensibility. This, Professor Bardeleben thinks, was probably due to the fact that the arterial supply of the outer part of the thigh is derived from the profunda.

In some remarks on this case, Professor Bardeleben states that there was, without doubt, a peculiar tendency in the patient's skin to become gangrenous on the application of even slight pressure. The man did not suffer from diabetes, but the fact of a few small doses of iodide of potassium, administered at an early stage of the treatment, having suddenly caused an eruption over the whole surface of the body, indicated some abnormal condition of the skin. Such condition, as shown by the sudden dilatation of the small cutaneous vessels through the action of an internal irritant, might, it is suggested, have been the origin of the impairment and loss of vitality in the skin, caused by such pressure as would not have had such bad results if applied to the skin of other subjects. In discussing the rival claims of deligation and external compression in the treatment of popliteal aneurism, Professor Bardeleben gives it as his opinion that, though the risks attending the cutting operation may be much reduced by carrying out Lister's antiseptic method, it is better to have recourse to that plan of treatment, which, from its not necessitating any division of skin, is of an antiseptic character. Compression, however, ought not to be carried too far in unfavourable cases; and, when it is clear that the affected limb will not tolerate such treatment, the surgeon should at once resort to antiseptic deligation.

W. JOHNSON SMITH.

BECK ON THE DIAGNOSIS OF INJURIES OF THE ABDOMEN.

IN a communication by Dr. B. Beck on cases of injury to the intestines, liver, and bladder (*Deutsche Zeitsch. für Chir.*, Band xv; *Med.-Chir. Rundsch.*, 1882, p. 112), it is stated that a prompt and decided diagnosis as to rupture of an internal organ in cases of a blow on the abdomen is attended with extreme difficulty, since there is not any one characteristic symptom of such lesion, and it is only through careful observation and study of all the symptoms that a correct conclusion can be attained. Of the general symptoms, a high degree of shock, which condition is rarely absent in cases of severe abdominal concussion, indicates laceration of an internal organ. Intense and persistent collapse, associated with a thready and very rapid pulse, and shallow and quick breathing, will remove any doubt as to the occurrence of internal bleeding. Whilst with simple abdominal contusion, febrile phenomena are seldom observed, a high and increasing temperature, together with increase of the pulse and respiratory movements, would indicate peritonitis from effusion of intestinal contents. Of the local symptoms, the most important is that of pain, which is localised, spontaneous, and but slightly affected by pressure. This pain steadily increases in severity until the stage of intestinal paralysis, when it ceases. In cases of contusion, on the other hand, the pain is not so acute; it is increased by pressure, varies in intensity at different times, and often ceases suddenly. The physical abdominal symptoms, as swelling, distension, resistance, and the changes in percussion-sounds, have not, Dr. Beck holds, the diagnostic value that have been claimed for them by Dr. Moritz (*St. Petersburger Med. Woch.*, 1879). Sudden tympanites, with a clear sound over the hepatic region, is not likely, in Dr. Beck's opinion, to occur with rupture of the intestine, unless this rupture be very extensive. In ordinary cases, the intestinal gas escapes into the abdominal cavity so gradually, and in such small quantities, that it could not give rise to any sudden and marked external signs. On the other hand, in some cases of abdominal contusion without rupture of intestine, Dr. Beck has made out a clear percussion-sound over the region of the liver, this condition having been due to paralysis of a small portion of intestine, and to accumulation above this paralysed portion of a considerable quantity of gas.

The later local symptoms observed in cases of intestinal rupture are usually but the results of the peritonitis due to escape of poisonous gas. Immobility of the patient and dread of being disturbed are not, it is stated by Dr. Beck, characteristic symptoms of ruptured intestine. In almost every case of abdominal injury, the patient at first remains at absolute rest; but, in advanced stages, in cases of rupture, and after peritonitis has spread extensively, the patient, suffering from pain and the distension of tympanites, endeavours to allay his intolerable condition by frequent changes of position. Much importance is to be attributed to vomiting, which, in cases of slight abdominal injury, soon ceases after the disappearance of the symptoms of shock. In cases, on the other hand, of communication between the intestinal canal and the peritoneal sac, vomiting steadily increases, and the patient is much troubled by frequent and profuse ejections of bilious fluid. Retention of urine and difficulty in micturition are to be regarded as symptoms of some value. Neither

of these is likely to be observed in cases of slight abdominal injury; but the use of the catheter is often required when peritonitis has resulted from rupture of the intestine, or of some other internal organ. The following conditions indicate with certainty the occurrence of rupture of the bladder: intense pain in the region of the bladder, anuria, signs of the presence of free fluid in the peritoneal sac, swelling and distension of the abdomen, purulent peritonitis, which, however, does not run so rapid a course as that due to rupture of intestine, pelvic infiltration, and a small quantity of urine in the bladder, and this mixed with fluid or coagulated blood. The extent and severity of this collection of symptoms varies in different cases, according to the seat of the vesical rupture.

In discussing the treatment of abdominal injury from direct violence, particularly from a kick, Dr. Beck points out that it is advisable, in cases of doubt, to take the most unfavourable view of the case, and to treat the patient in accordance with such view, by insisting on absolute rest, by applying leeches and cold compresses to the abdomen, and by administering opium internally, or, when there is obstinate vomiting, by giving subcutaneous injections of morphia. The patient should occasionally suck small lumps of ice, and be restricted to cold and fluid nourishment. By no means should any clyster be administered, lest, by such treatment, active movements of the injured intestine be excited.

It has been proved, on *post mortem* examination, that, under such treatment as this, sealing together of the margins of the intestinal rent by fibrinous exudation and even firm occlusion may result; but, in such cases, when but even a very small quantity of intestinal contents has been effused, this treatment rarely results in cure. Operative interference, in cases of intestinal rupture, ought, in Dr. Beck's opinion, not to be considered; as in many of these cases the rupture is inaccessible through its deep situation, and through the glueing together of the intestinal loops by the products of recent peritonitis.

W. JOHNSON SMITH.

VULPIAN ON PARALYSIS THROUGH COMPRESSION OF NERVES.

PROF. VULPIAN has recently communicated to the Academy of Medicine of France (*Bulletin*, No. 10, 1882) the following case of paralysis of the upper extremity after the use of crutches. The patient was a woman who, in consequence of chronic disease of the right knee, had been compelled to use crutches. A few days before her admission into the *Hôtel Dieu*, the handles of the crutches became uncovered, so that the skin of the armpits and the brachial nerves were compressed by bare and hard wood. The patient soon complained of pain in the forearms and hands; the backs of the wrist and fingers swelled, and, at the same time, the superior limbs became extremely weak. When the patient was first seen by M. Vulpien the forearms and hands were paralysed. At the end of twenty-four hours the swelling had disappeared, and the patient no longer complained of pain, but the paralysis still persisted.

In his comments on this case, M. Vulpien states that the pressure of the crutches had acted on all the brachial nerves. This is not invariably the result of such pressure. Sometimes but one nerve is affected, and the paralysis is observed only in the

muscles supplied by this nerve. The paralysis was much more complete and marked in the right extremity than in the left. There was only paralysis of mobility; the sensibility remained intact and the vaso-motor nerves retained their functions. The muscles of the right forearm and hand, the side most paralysed, preserved their contractility in almost a normal degree. The nerves, however, did not exert any contractile action on the muscles. Faradisation of the musculo-spiral nerve, for instance, was not followed by any contraction of the common extensor muscle, although when applied over the muscle itself it caused strong movements. This condition was analogous to that of the muscles and nerves of a frog poisoned by curare. In complete paralysis thus caused in this animal the muscles remain contractile, whilst the nerves, whether submitted to galvanic or faradic currents, do not execute the least muscular contraction. This is not the constant condition in paralysis through the use of crutches. If the nerves have been so forcibly compressed as to undergo structural change, the muscles soon fail to respond, or, at least, respond but feebly, to faradic stimulation, but continue, on the contrary, to contract under the influence of galvanic currents. In short, one may observe the particular characteristics of morbid change in the motor nerves. In such cases, the affected muscles speedily undergo atrophy.

In this case, M. Vulpian states, it is difficult to admit, that the motor fibres of a large nerve, the musculo-spiral, for instance, could be affected by the pressure of a crutch-handle, whilst the sensory, vaso-motor, and secretory nerve-fibres, mixed with motor fibres in this nerve-trunk, had escaped pressure. If the motor nerve-fibres be paralysed, and not the other fibres, this result must then be due to some modification existing at the intramuscular terminations of these fibres, a modification which, as has already been mentioned, may be compared to the result produced by curare at points where the ends of the motor fibres come into relation with the proper substance of the striated muscular bundles. In this patient, when some improvement had been derived from daily electrification, although faradic stimulation of the musculo-spiral nerve readily excited muscular contractions, but very feeble contractions could be effected by the will in the muscles supplied by this nerve. It is thought probable that, in other cases of paralysis through the use of crutches, there may be, for some days at least, an absence of voluntary movements, whilst it is possible to excite contractions by direct faradisation of the nerves. M. Vulpian states that the conditions noted in this case were similar to those of the so-called paralysis *a frigore*, and he alludes to the opinion expressed in 1871 by M. Panas that most of the cases of paralysis *a frigore* are cases of paralysis by compression. Having observed this case, in which the paralysis, evidently produced through the pressure of cortices on the musculo-spiral nerves, resembled the phenomena of the so-called paralysis *a frigore*, M. Vulpian agrees in the opinion of M. Panas. It is pointed out that in many of the latter cases the musculo-spiral nerve had been subjected to continuous compression, and that frequently the paralysis had been produced without any decided intervention of cold. In a brief summary of his paper, M. Vulpian states that prolonged compression of a nerve may produce paralysis of this nerve, characterised by a temporary interruption of the transmission of stimuli through the motor nerve-fibres to

striated muscular bundles, whilst both these anatomical elements retain their physiological properties.
W. JOHNSON SMITH.

RIBBERT ON THE INFLUENCE OF TANNIC ACID ON ALBUMINURIA.

DR. H. RIBBERT (*Centralb. für die Med. Wiss.*, 1882, No. 3; *Pester Med. Chir. Presse*, No. 8) having produced albuminuria in rabbits by means of ligature, injected a 0.5 per cent. solution of tannic acid into the jugular veins. The kidneys were subsequently removed and examined, both in the recent state and after having been subjected to boiling. A marked diminution in the quantity of coagulated fibrin in the Malpighian capsules was observed, in comparison with other kidneys not previously acted upon by tannic acid. A similar experiment with 25 cubic centimetres of a 2 per cent. solution of tannate of soda was made, in confirmation of Lewin's investigations on the action of the salt, and it was found that in most of the glomeruli the albumen was completely absent, and in others only a very narrow ring was present, and in a few a somewhat broader zone. From these experiments it would appear that albuminuria of traumatic origin may be lessened, or actually prevented, by the action of tannin, and a distinct experimental support is given to Frerichs's application of tannic acid in nephritis. Dr. Ribbert thinks, therefore, that the treatment of nephritis with tannin should be perseveringly tried, especially with tannate of soda, and this in far larger doses than have ever been given of the acid. Experience must teach to what extent these doses may be pushed. Anatomical considerations lead clearly to the indication that the drug is most likely to succeed in cases of commencing nephritis, if, as Dr. Ribbert has made out, all forms of nephritis commence in the glomeruli. He suggests that, besides lessening the transudation of albumen, the tannic acid may perhaps also influence the epithelial desquamation about the glomerulus.

If parenchymatous or interstitial nephritis have become established, there is little to hope from the drug, unless the opinion be held that the loss of albumen, by its weakening effect upon the general organisation, of itself serves to keep up the renal affection.

The treatment must be kept up for a considerable time. The average quantity of albumen thrown off in inflammation of the human kidney, judging by the breadth of the zone obtained by boiling or hardening, is by no means so considerable as that found in the rabbit's kidney half an hour after the removal of the ligaturing forceps, and the almost complete success of injection of tannate of soda, in the latter case, leads to the belief that the use of the drug in human nephritis would be attended by still more satisfactory results.

E. CLIFFORD BEALE, M.B.

THE MAXIMUM DOSES IN THE NEW GERMAN PHARMACOPŒIA.

THE new draft of the table of maximum doses of the German *Pharmacopœia* is reviewed by Professor Eulenburg in the *Berl. Klin. Woch.*, 1882, No. 6. The doses are given in grammes, and decimal parts of grammes.

	Maximum Single Dose.	Maximum Daily Dose.
Acetum Digitalis ...	2.0	10.0
„ Scillæ ...	2.0	10.0
Acidum arsenicosum ...	0.005	0.92
„ carbolicum cryst. ...	0.1	0.5
Apomorphinum hydrochl. ...	0.01	0.02
Aqua amygd. amarum ...	2.0	8.0
Argentum nitricum ...	0.03	0.2
Atropinum sulfuricum ...	0.001	0.003
Auro-Natrium chloratum ...	0.05	0.2
Bulbus Scillæ ...	0.2	1.0
Cantharides ...	0.05	0.15
Chloralum hydratum ...	3.0	6.0
Codeinum ...	0.05	0.2
Coffeinum ...	0.2	0.6
Cupr. sulf. pro emetico ...	1.0	—
Extractum Aconiti ...	0.02	0.1
„ Belladonnæ ...	0.05	0.2
„ Cannabis Indicæ ...	0.1	0.6
„ Colocyntidis ...	0.05	0.2
„ Hyoscyami ...	0.2	1.0
„ Opii ...	0.15	0.5
„ Scillæ ...	0.2	0.8
„ Secalis cornuti ...	0.2	1.0
„ Strychni spirit. ...	0.05	0.15
Folia Belladonnæ ...	0.2	0.6
„ Digitalis ...	0.2	1.0
„ Hyoscyami ...	0.3	1.5
„ Jaborandi ...	0.5	10.0
„ Stramonii ...	0.2	1.0
Gutti ...	0.3	1.0
Hydrargyr. bichlor. corros. ...	0.03	0.1
„ bijodat. rubr. ...	0.03	0.1
„ jodat. flavum ...	0.05	0.2
„ oxydat. rubrum ...	0.03	0.1
„ „ v. h. par. ...	0.03	0.1
Iodoformium ...	0.2	1.0
Iodum ...	0.05	0.2
Kali chloricum ...	2.0	10.0
Kossinum ...	?	?
Kreasotum ...	0.05	0.2
Lactucarium ...	0.3	1.0
Liquor Kali arsenicosi ...	0.5	2.0
Morphium hydrochlor. ...	0.03	0.1
„ sulfuricum ...	0.03	0.1
Oleum Crotonis ...	0.05	0.1
Opium ...	0.15	0.5
Phosphorus ...	0.001	0.003
Physostigminum salicylic. ...	?	?
Pilocarpinum hydrochlor. ...	0.03	0.06
Plumbum acetikum ...	0.1	0.3
Santoninum ...	0.1	0.3
Secale cornutum ...	1.0	5.0
Semen Strychni ...	0.1	0.2
Strychnium nitratum ...	0.01	0.02
Summitates Sabinæ ...	1.0	2.0
Tartarus stibiatus ...	0.2	0.5
Thymolum ...	0.1	0.5
Tinctura Aconiti ...	0.5	2.0
„ Cantharidum ...	0.5	1.5
„ Colchici ...	2.0	6.0
„ Digitalis ...	2.6	6.0
„ Iodi ...	0.2	1.0
„ Lobeliæ ...	1.0	5.0
„ Opii crocata ...	1.5	5.0
„ „ simplex ...	1.5	5.0
„ Scillæ ...	2.0	6.0
„ Strychni ...	1.0	2.0
Tubera Aconiti ...	0.1	0.5
Veratrinum ...	0.005	0.02
Vinum Colchici ...	2.0	6.0
Zincum sulfuric. pro emet. ...	1.0	—

used drugs the determination of a maximum dose seemed appropriate); 3, Apomorphinum hydrochloratum (now accepted in the *Pharmacopæia*); 4, Bulbus Scillæ (a maximum dose was considered appropriate); 5, Chloralum hydratum (likewise); 6, Caffeinum (likewise); 7, Extractum Scillæ; 8, Extractum Secalis cornuti (likewise); 9, Folia Jaborandi (accepted now for the first time); 10, Hydrargyrum oxydatum v. h. par. (the addition seemed justified for the sake of completeness); 11, Iodoformium (a maximum dose appeared advisable); 12, Iodum (likewise); 13, Kali chloricum (likewise, especially with regard to several poisoning cases lately recorded); 14, Kossinum (now first accepted); 15, Physostigminum salicylicum (likewise); 16, Pilocarpinum hydrochloricum (likewise); 17, Secale cornutum (maximum dose was thought appropriate); 18, Summitates Sabinæ (likewise); 19, Thymolum (now first accepted); 20, Tinctura Lobeliæ; 21, Tinctura Scillæ (a maximum dose seemed appropriate for both the older remedies).

On the whole, in spite of many new additions, the number of the remedies arranged in the table of maximum doses is diminished by 15, a change which will certainly meet with the approval of students preparing for the State examination.

With a few exceptions, the alterations made in the dosage are inconsiderable. They consist, for the most part, in simplifying the expression of the decimal weights, and in the immediate translation of the medicinal weights of the former plan to the gramme standard; *e.g.*, 0.05 now generally replaces 0.06, and 1.0 stands for 1.2. There is further a gradual introduction of a greater congruity between the single dose and the daily dose, or between the different preparations containing one and the same active principle.

The settlement of a maximum dose for the recently introduced remedies 'Kossinum' and 'Physostigminum salicylicum' has been reserved for final determination.

The *Pharmacopæia* Commission likewise reserved to themselves to decide hereafter whether—as was proposed by one of the members—the highest doses in the table should not be expressed in words as well as in figures.

The Commission considered that they ought to decline the proposition, made by several physicians, medical societies, etc., to draw up special tables of maximum doses for children, and also for hypodermic injections. The reasons for this decision were the following. The establishment of a table of maximum doses for children in general appeared most difficult; it would have been necessary to distinguish the various periods of childhood; and, again, to render possible the control of the maximum dose ordered, the additional duty would fall upon the physician of stating his patient's age on each prescription. A table of maximum doses for hypodermic injections was also disregarded, although, from certain points of view, it might appear appropriate; because such a table might then, with equal justice, be demanded for all other external applications, injections, inhalations, etc.; and because, further, in the ordinary method of ordering solutions for hypodermic injection, the strength of the individual dose used each time is, as a rule, altogether disregarded.

E. CLIFFORD BEALE, M.B.

The new table contains the following preparations which were wanting in the old one: 1, Acetum Digitalis; 2, Acetum Scillæ (for both of these frequently

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. SALTER.—Acute Traumatic Tetanus successfully treated by Chloral and Bromide of Potassium. (*Practitioner*, Feb. 1882, p. 99.)
2. GREEN.—Nitro-Glycerine in Heart-Disease. (*Ibid.*, p. 103.)
3. FENWICK.—The Salicylates and their Use. (*Lancet*, Feb. 1882, p. 216.)
4. SPENCER.—Nutrient Suppositories. (*Practitioner*, Feb. 1882, p. 112.)
5. HARRIES.—Boracic Acid applied locally in Diphtheria. (*Lancet*, Feb. 1882, p. 306.)
6. BLAKE.—Relation of Physiological Action with the Atomic Weights of the Elements. (*Chemical News*, 1882, p. 111.)
7. EDSON.—Hydrangea in Renal Calculus. (*New York Med. Record*, Dec. 10, 1882.)
8. KENNER.—A Solvent for Sulphate of Quinine. (*Louisville Med. Times*.)
9. VAN OYE.—Antithermic and Apyretic Effects of Phenic Acid in Typhoid Fever. (*Paris Méd.*, Nov. 19, 1881.)
10. Treatment of Puerperal Convulsions by Pilocarpine. (*Jour. de Méd. de Bruxelles*, Oct. 1881.)
11. SENA.—Bread prepared with Sea-Water. (*New York Med. Rec.*, Feb. 4.)
12. GALLICO.—Chronic Dysentery Treated by Injections. (*Gaz. Med. Ital. Prov. Ven.*, Dec. 31, 1881.)
13. GROCCO.—The Action of Pilocarpine. (*Gaz. Med. Ital. Lombardia*, Feb. 25, 1882.)
14. SCHÆFER.—On a more Active Form of Ergot. (*Berl. Klin. Woch.*, 1881, No. 21.)
15. ROHRER.—On Coto-bark. (*Corresp. für Schweizer. Aerzte*, No. 22, 1881.)
16. RIVET.—Some Additional Effects of Sulphate of Quinine. (*L'Union Méd.*, Nov. 1, 1881.)
17. BRIEGER.—The Therapeutic Value of the newly recommended Drugs, Resorcine and Chinoline. (*Deutsche Med. Zeitung*, Feb. 2, 1882.)

1. *Salter on Acute Traumatic Tetanus Successfully Treated by Chloral and Bromide of Potassium.*—Mr. J. H. Salter contributes, in the *Practitioner*, Feb. 1882, p. 99, another to the long series of cases of this disease that have yielded while under treatment with the two drugs named. In twenty-six days, sixty drachms of chloral and eighty drachms of bromide of potassium were consumed. [A reference to Sections 1327 and 1328 of the *Medical Digest* will show how valuable this mode of treatment had proved in many hands up to the end of 1876, and during the last five years a large amount of corroborative evidence has been accumulated.—*Rep.*]

2. *Green on Nitro-Glycerine in Heart-Disease.*—Mr. W. E. Green (*Practitioner*, Feb. 1882, p. 103) testifies to the vast value of this drug in many cases of cardiac disturbance. Its value in angina pectoris was noticed in the LONDON MEDICAL RECORD, 1881, p. 409. In weak dilated and fatty hearts, Mr. Green finds it also of great value, relieving arterial tension, and thus lessening the amount of work the heart has to do. In a case of abdominal dropsy, due to portal obstruction, the nitro-glycerine quickly effected a vast improvement. Mr. Green believes that he may claim for the drug a far wider field of usefulness than that already accorded to it.

3. *Fenwick on the Salicylates and their Use in Rheumatism.*—Dr. Bedford Fenwick adduces, in the *Lancet*, Feb. 1882, p. 216, the fact that, as the sulpho-

cyanides in excess exist in the saliva in all cases of acute and chronic rheumatism, and as the salicylates do not diminish the quantity of these sulphocyanides, therefore salicylates are not antidotes to the rheumatic person, although they are most valuable if given in scruple doses, every hour, for six doses, and then suspended altogether. Twelve hours after ceasing the salicylates, half-drachm doses of citrate of potash, every six or eight hours, will effectually prevent relapse, if given until the saliva is alkaline. Dr. Fenwick's observations enable him to assert positively that heart-complaints are less frequent under the above plan of treatment, and also that eggs, as articles of diet, are peculiarly obnoxious to rheumatic patients.

4. *Spencer on Nutrient Suppositories.*—In the *Practitioner*, Feb. 1882, p. 112, Mr. Spencer details the mode of preparing these valuable aids in rectal nutrition, and which may be obtained from Messrs. Slinger of York. Several observers have put their value to the test, and can testify that it is real.

5. *Harries on Boracic Acid Applied Locally in Diphtheria.*—Mr. T. D. Harries adds another to the already long list of specifics for local application in this disease. In the *Lancet*, Feb. 1882, p. 306, he states that a solution of boracic acid, two drachms to the ounce of a mixture of equal parts of glycerine and water, freely applied to the diseased parts, is a most certain and speedy cure. R. NEALE, M.D.

6. *Blake on the Relations of Physiological Action with the Atomic Weights of the Elements.*—Dr. James Blake of California reverts to this subject (*Chemical News*, 1882, p. 111). In a paper read before the Royal Society in 1840, he endeavoured to show that the physiological action of inorganic substances, when introduced directly into the blood of living animals, was determined by their isomorphous relations, all the substances in the same isomorphous group causing analogous physiological actions. In 1870, in a paper read before the California Academy of Sciences, he showed that, amongst the compounds of the more purely metallic elements in the same isomorphous group, the intensity of physiological action was determined by the atomic weight; the higher the atomic weight of an element in the different isomorphous groups, the smaller the quantity required to cause the same amount of physiological action. These facts Dr. Blake now applies to determine the atomic weight of beryllium, a metal, the true position of which among the elements is a matter of dispute. The result is that beryllium is assigned to the aluminium, and not to the magnesium, group of metals. The intensity of physiological action of the salts of beryllium is in accordance with its atomic weight as a member of the former group of metals. In operating upon rabbits, 23 milligrammes of the sulphate is the quantity per kilogramme of body-weight required to ensure a fatal result, or 0.16 grain per pound.

T. STEVENSON, M.D.

7. *Edson on Hydrangea in Renal Calculus.*—Dr. B. Edson of Brooklyn (*New York Med. Record*, Dec. 10, 1881) alleges that he has obtained very good results from the use of drachm doses of the fluid extract of hydrangea arborescens in renal calculus, under which name a very good case of what is commonly called gravel is described. What the rationale of this action of the drug is, Dr. Edson does not profess to explain. He cites several additional cases from his own observation and that of others. The drug would certainly seem to merit trial in renal colic and allied affections.

8. *Keuner on a Solvent for Quinine Sulphate.*—Dr. Keuner writes (*Louisville Med. News*) that he was called to see a patient ill of remittent fever, who could not take pills or swallow quinine unless it were given in solution. To an ounce of sweet spirit of nitre he added twenty grains of sulphate of quinine, and found that he had discovered a perfect solvent for the quinine. He uses the spirit of nitre whenever he wants a solvent, since it makes a beautiful solution, and appears to counteract, in some measure, the nausea which is often troublesome in fevers. To counteract nausea and headache in fevers, however, he relies chiefly on the potassium bromide. He generally leaves about two drachms, directing the nurse to put it in a glass of water, and allows the patient to drink small quantities through the day, especially after each dose of the quinine. He has found this to relieve patients to a considerable extent, if not altogether, of sick stomach, ringing in the ears, etc.

9. *Van Oye on the Antithermic and Apyretic Effects of Carbolic Acid in Typhoid Fever.*—In 1880, M. Desplats of Lille published a series of observations on this question. Dr. Van Oye has now published a thesis, of which the following are the conclusions (*Paris Méd.*, Nov. 19, 1881, p. 293). 1. Carbolic acid is a poison to the nervous system, and possesses in a high degree the property of lowering the temperature of man and the higher animals. 2. Doses of carbolic acid that have no appreciable action on the normal temperature suffice to lower the febrile temperature. 3. This lowering is produced in febrile patients, both in simple inflammation and in infectious pyrexia. 4. It commences a few moments after taking the medicine; its extent varies according to the dose, from 1 to 3 deg. Cent. (1.8 to 5.4 deg. Fahr.); its duration, from one to three hours. 5. Its probable mechanism is the loss of caloric resulting from cutaneous hyperæmia, and more or less abundant sweating, coinciding with its production. 6. Rigor and all the phenomena of the febrile attack occur, when the antipyretic action of the preceding dose is exhausted; at the same time, the temperature rises again rapidly to its former level, or beyond it. 7. A fresh dose may interrupt this attack, and even prevent it when administered in time. 8. The doses sufficient to produce the whole utility of the antipyretic effect do not exert any injurious toxic action on the fever-patient. 9. Fifty centigrammes administered by the rectum are sufficient in all cases at the outset; generally, the dose may be progressively increased to 2 grammes, or 12 grammes in the day. 10. One gramme at the outset has been sufficient, in certain subjects with special susceptibility, to produce a depression of temperature as low as 34.5 deg. Cent. (94.1 deg. Fahr.) This considerable depression has not had in any case any injurious effect upon the patient. 11. Pulmonary congestion is a danger to be feared and avoided. 12. Albuminuria, polyuria, and perhaps fatty degeneration, are possible effects of large doses long continued. 13. The antipyretic effects of phenic acid should be reserved for the purpose of combating the excessive temperature in continued fevers, and attacks of intermittent fevers.

10. *Treatment of Puerperal Convulsions by Pilocarpine.*—Pilocarpine is employed in the Maternity Hospital of Brussels in the treatment of eclampsia, as well as in premature labour. The following are the results obtained (*Jour. de Méd. de Bruxelles*, Oct. 1881, p. 315). Hydrochlorate of pilocarpine injected subcutaneously in doses of 1, 1½, or 2 centigrammes (.15 to .30 grains), is generally borne well

by the patients; they do not manifest any repugnance to the repetition of the doses, even at close intervals. The uterus is manifestly influenced a few moments after the injection, even when there is no anterior contraction. This substance does not act in the same degree in all subjects, nor in the same person in its various applications. The uterine contraction is reproduced a certain number of times, and then is relaxed; pilocarpine aids the mechanical means which tend to advance labour. It has a remarkable power in attacks of eclampsia, especially in subjects suffering from generalised œdema. When there exists a profound coma, prolonged during the whole interval of the attack, much more prompt return is obtained of the intellectual faculties than obtained by the other means employed for this purpose. So long as the bag of waters is intact, the fœtus does not appear to feel the effects of the remedy.

11. *Sena on Bread Prepared with Sea-Water.*—Dr. Sena has carefully studied the internal administration of sea-water, and asserts its efficacy in scrofula and other conditions of malnutrition, and its utility as a preservative in many other maladies difficult to combat. In order to avoid the objections to administering sea-water as such, it is used in the preparation of bread, which is preferable to the ordinary article, is less insipid, and may be kept longer. All the properties of the chlorides and iodides combine to make it at once a hygienic food and a therapeutical agent. The statistical data cited by the author (*New York Med. Record*, Feb. 4) show the results obtained in the Misericordia Hospital at Valencia, one of the finest charitable establishments in Spain, where this bread has been adopted. Comparing the number of patients cured after this bread had been made use of, with the number cured the year before, a considerable increase is noticed. Dr. Sena concludes as follows. 1. Bread prepared with sea-water is exceedingly useful in the prevention and cure of scrofula. 2. It possesses the same virtues as the liquid in corresponding doses. 3. It should be used by all charitable institutions near the coast. 4. Bakers in towns so situated should prepare it as a hygienic article of diet.

12. *Gallico on Chronic Dysentery Treated Successfully by Injections.*—Dr. Gallico (*Gaz. Med. Prov. Venete*, Dec. 31, 1881) relates the case of a man, aged 34, who had for some time been under treatment for chronic dysentery by the usual remedies, but without avail. All medicines were then discontinued, and injections *per rectum* of tannic acid and laudanum substituted. The strength of the injections varied from 15 to 30 grains of tannic acid, and about 6 minims of laudanum to the pint of water. This treatment was continued for six weeks, with intervals. The improvement in the patient's symptoms at once became marked. The above injections were subsequently followed by others containing 3 per cent. of perchloride of iron, in order to continue the astringent action. The result was complete cure after about six weeks of the above treatment.

13. *Grocco on the Action of Pilocarpine.*—Dr. P. Grocco (*Gaz. Med. Ital. Lombardia*, Feb. 25, 1882) calls attention to the power which pilocarpine apparently possesses of restoring sensibility in certain cases of hemianæsthesia. The author claims from his experiments to have established that the same powers which Dr. Burq showed to reside in certain metals resides also in certain alkaloids. The first case experimented on was in a male patient, aged 28, who was suffering from anæsthesia, with paræsthesia,

probably of malarial origin, round the knee-joint. Sensibility was restored to the part within ten minutes by a hypodermic injection of pilocarpine of about one-sixth of a grain. In the second experiment, on a young girl, sensibility was observed to return gradually, and pass from one arm to the other, much as it does after the application of certain metals. In this case the alkaloids, morphia, strychnia, and atropia, when similarly applied, gave negative results. The third and fourth experiments were essentially of the same nature. In the fifth experiment morphia and pilocarpine were placed at two points distant from each other on the same limb, and the return of sensibility was watched for. On several occasions the author was able to show that this return was for the moment checked as soon as the sensibility reached the spot on which the morphia lay. From these and other experiments, Dr. Grocco concludes that pilocarpine can affect sensibility under certain conditions as metals can; that is, either when injected subcutaneously or simply when laid on the surface. LITTON FORBES.

14. *Schaefer on a more active form of Ergot.*—Dr. S. Schaefer (*Berl. Klin. Woch.*, No. 21, 1881; *Der Prakt. Arzt.*, No. 1, 1882), having abundant opportunity of observing the well-known fact that the preparations of ergot at present in use are very prone to lose their activity after being kept for a short time, has arrived at the conclusion that the uncertainty in the action of the drug depends directly upon the longer or shorter period of time which may have elapsed since the crushing of the individual corns, and that a certain result can only be expected from ergot recently pulverised. To this end he has for many years forbidden the storage of powdered ergot in the 'Apotheke' which he employs, insisting upon the corn being fresh ground in a mill in the presence of his messenger. This precaution (not demanded in the German *Pharmacopœia*) has had the result of obtaining for the druggist a local reputation for the excellence of his ergot amongst surrounding practitioners. The explanation is found by Dr. Schaefer in the protective action of the horny covering of the corns, which, by completely excluding air from the central parts, prevents the rapid change in the sclerotinic acid, etc., which follows exposure to the atmosphere even for a short period, by which so much of the activity of the drug is lost. He believes that, by the universal adoption of this precaution, ergot would rapidly retrieve its tottering reputation. E. CLIFFORD BEALE.

15. *Rohrer on Coto Bark.*—In the *Correspondenzbl. für Schweizer-Aerzte.*, No. 22, 1881, Dr. Rohrer reports very favourably on the use of coto bark and its preparations, the one which he uses being the tincture of coto (dose, 4 to 10 drops for children, 15 to 30 for adults); also the crystalline alkaloid "cotoïn" (5 to 15 centigrammes for a child, up to 30 centigrammes for adults). He has used it in 180 cases, viz., 162 of diarrhoeal disorders, 15 of typhoid fever, and 3 of hyperidrosis, and finds that no remedy of those usually used in these affections offers such great advantages as coto, more especially in the treatment of the diarrhoea of children. The dose of the powdered bark is 1 to 3 centigrammes for children, and up to 30 centigrammes for adults; and it is given hourly in water.

16. *Rivet on some Additional Effects of Sulphate of Quinine.*—M. Rivet (*L'Union Méd.*, Nov. 1, 1881) observed some rare effects said to be produced by quinine in three patients; in the first, scarlatinal eruption, with vomiting and dyspnoea; in the second,

vesical spasm and hæmaturia, accompanied by urticaria; and in the third, another salt of quinine had been exchanged for the sulphate, which now produced vomiting, dyspnoea, præcordial anxiety, and diarrhoea. As a means of combating these unpleasant effects, Rivet recommends morphia administered subcutaneously.

17. *Brieger on the Therapeutic Value of Resorcine and Chinoline.*—Dr. Brieger (*Deut. Med. Zeit.*, Feb. 2, 1882) has carried out experiments on resorcine and chinoline in the clinic of Dr. Frerichs, and gives the results in a paper read on January 30, at the meeting of the Verein für innere Medicin. Resorcine was first recognised as a check to decomposition and fermentative processes and as a powerful antiseptic, by Andeer, and it was believed that there was no external disease in which it did not prove effective. Brieger has, however, got no good result from even a 5 per cent. solution in gonorrhœa. Internally, he tested its antifermentative and antipyretic qualities in typhus and pneumonia, and found that doses of 1½ grammes lowered the temperature somewhat; however, the larger number of the patients thus treated fainted easily, complained of tinnitus aurium, and exhibited startling delirium. In a few patients the pulse became small and soft, the heart's impulse less strong; heavy rigors and perspirations followed, and, lastly, collapse, from which they were with difficulty recovered. If the dose were pushed beyond 3 grammes symptoms analogous to poisoning by carbolic acid were observed; whilst the lowering of temperature only lasted a short time, to be succeeded, in from one and a half to two hours, by increase of fever and temperature to even a higher degree than before. The nausea was also very objectionable. It might be suggested that, as small doses lowered the temperature for a time, larger doses could be administered to lengthen the effect; but against this is the fact that resorcine is excreted as ether and sulphuric acid, and only a part is further oxidised and forms coloured products of oxidation. Hence, as resorcine is administered, the body becomes poor in sulphuric acid, and receives bodies which act as poisons on it. As an antipyretic, therefore, this drug is not to be recommended on any account. It has also been lauded in intermittent fever; but, as in well-constructed hospitals this fever is observed to pass over favourably without medication, Brieger has not administered resorcine to the patients. He has used the other agent, chinoline, without the slightest effect in typhus, pneumonia, rheumatism, and remittent fever; it being in some cases vomited, thereby probably reducing the temperature very slightly. It has also bad effects following its administration, e.g., disturbances of digestion, vomiting, and nausea; so that it does not seem advisable to use chinoline in its present form. Hiller has made similar observations, which were extended to phthisis and enteric fever, with like results, using the tartrate of chinoline, which is very insoluble and of a very disagreeable taste, producing vomiting in three-fourths of all the patients to whom it was given; he has therefore abandoned it. Guttman used resorcine as a wash for the bladder in chronic cystitis in three patients, in whom it caused intense pains and hæmaturia with renal elements, which at once ceased when salicylic acid solution was used. He trusts that such washings-out with resorcine will never be undertaken again. Brieger, lastly, is astonished that Soltmann recommends it for children with stomachic ailments. F. WILLIAM ELSNER.

MEDICINE.

RECENT PAPERS.

1. STCHEGLOFF.—Successful Faradisation of the Enlarged Spleen in Malarial Cachexy. (*Trans. of Caucasian Med. Soc.*, No. 3, 1881.)
2. RYBALKIN.—Changes of Cutaneous Sensibility in the Febrile State. (*Vratch.*, No. 1, 1882.)
3. VARELA.—Anæmia Treated Successfully by Injections of Defibrinated Blood. (*El Genio Medico-Buidurj.*, Jan. 22, 1882.)
4. MILIOTTI.—A Case of Cortical Hemiplegia. (*Gaz. Med. Ital. Prov. Venete*, Nos. 6 and 8, 1882.)
5. POMMAY.—Two Cases of Gastric Epilepsy. (*L'Encephale*.)
6. LASÈGUE.—Certain Nervous Phenomena in Diabetes. (*Jour. de Méd. et de Chir. Pratiques*, March 1882.)
7. BUNCE.—Contagion through Domestic Animals. (*New York Med. Rec.*, March 4, 1882.)
8. LUY.S.—Emotional Hemiplegia. (*L'Encephale*, Sept. 1881.)
9. TESCHEMACHER.—Diabetes with Maniacal Symptoms. (*Berl. Klin. Woch.*, Aug. 1, 1881.)
10. KERAVAL.—Pericarditis in Bright's Disease. (*Etude Clinique*, Paris.)
11. RENDU.—Hepatic Abscess. (*La France Médicale*, June 7, 1882.)
12. BALLE.T.—The Tendon-Reflexes in Typhoid Fever. (*Le Prog. Méd.*, Oct. 8, 1881.)
13. RAYMOND and DREYFUS.—Aphasia. (*Archives de Neurolog.*, No. 7, 1882.)
14. BALL.—Functional Cerebral Ischæmia. (*L'Encephale*, No. 1, 1882.)
15. WOOD.—The Identity of Variola and Vaccinia. (*North Carolina Med. Jour.*, Jan. 1882.)
16. BUZZARD.—Symmetrical Sciatica in a Diabetic Patient treated by Salicylate of Soda. (*Ibid.*, Feb. 1882, p. 302.)
17. BEALE.—Hernia of the Lung through the Diaphragm. (*Ibid.*, Jan. 1881, p. 139.)

1. *Stchegloff on Faradisation of the Spleen in Intermittent Fever.*—The author (*Trans. of the Caucasian Med. Soc.*, 1881, No. 3) relates a case in which six faradaic applications of twenty minutes long each, at intervals of three days, produced diminution of the splenic tumour, as well as rapid improvement of general nutrition of the patient. As the fever never reappeared, Dr. Stchegloff concludes that the cure was radical. [A report of forty-two cases of intermittent fever, successfully faradised by Dr. Schroeder of St. Petersburg, may be found in the LONDON MEDICAL RECORD, October 1880, p. 409.—*Rep.*]

2. *Rybalkin on Cutaneous Sensibility in Febrile States.*—Having carefully examined seventy-two patients (sixty males and twelve females) attacked with febris recurrens, Dr. Rybalkin arrived at the following conclusions (*Wratsch.*, No. 1, 1882). 1. On the development of the second attack of recurrent fever, the sensibility to touch and pressure increases. 2. At the same time, the sense of temperature decreases. 3. Electro-cutaneous sensibility and the sense of pain increase. 4. Such changes are observed even on the first day of febrile movements. 5. In uncomplicated cases, these changes of cutaneous sensibility continue during from one to three days in the febrile state of the second attack. 6. Simultaneously with defervescence, all kinds of cutaneous sensibility decrease, except the sense of temperature, which now increases. 7. The changes of sensibility are not always developed in strict parallelism with the

lowering of temperature; sometimes the cutaneous sensibility remains the same on the first day after crisis as it was during the febrile state. 8. On the appearance of a third attack of recurrent typhoid, cutaneous sensibility undergoes the same changes as were observed during the second attack. 9. In some cases, no appreciable changes of sensibility are observed in the febrile state; in such cases, the individual peculiarities of patients seem to play the chief part. [Some time ago, Dr. Wroblensky made similar observations on changes of cutaneous sensibility in intermittent fever.—*Rep.*] V. IDELSON, M.D.

3. *Varela on a Case of Anæmia Treated Successfully by Injections of Defibrinated Blood.*—Dr. Desiderio Varela records a case of anæmia of a severe type, in which rapid improvement followed the use of defibrinated blood given *per rectum* (*El Genio Medico-Quirurgico*, Jan. 22, 1882). The patient was a female, aged 20, who presented in a typical degree all the symptoms of anæmia. In addition to these, however, there was a positive aversion on her part to nutrition of all kinds. The usual tonic and ferruginous remedies had proved ineffectual, and therefore, as a last resource, it was determined to resort to feeding *per rectum*. Every three hours two ounces of fresh defibrinated blood, warmed over a water-bath, were thrown into the rectum. No irritation or other bad consequences followed. A marked improvement took place as early as the third day after commencing the injections, which were gradually reduced in frequency as the functions of the stomach became restored.

4. *Miliotti on a Case of Cortical Hemiplegia.*—Dr. Domenico Miliotti (*Gaz. Med. Ital. Prov. Venete*, Nos. 6 and 8, 1882) records a carefully observed case of cortical hemiplegia, with the *post mortem* appearances. The patient was a man, aged 22, of diminutive appearance, and through life of feeble health. The earlier symptoms of his case, as observed on admission, were paralysis of the left leg, followed three or four days later by a similar condition of the left arm, in both instances ushered in by clonic spasms of one or other limb. There was no loss of consciousness, but intense cephalalgia. The left pupil was more dilated than the right, but both responded normally to light. A careful examination showed that the right arm, though perfectly immovable, had lost neither sensation nor reflex sensibility. The lower limb had lost, in great part, the power of reflex action, and exhibited a well-marked *tâche méningitique*. The highest temperature noted at any time during the case was 39.9 deg. Cent. (103.8 Fahr.) The disease gradually progressed to a fatal termination, facial paralysis being a marked symptom towards the end. On removing the calvarium, the whole right half of the cerebrum was noticed to be larger than the left, and the meningeal artery and vein of the same side were fuller than on the opposite. The right convolutions were manifestly flattened. At the base of the brain the quadrangular portion bounded anteriorly by the optic tract, and posteriorly by the peduncles, was covered by a gelatinous yellow substance, which extended as far back as the pons Varolii. The arachnoid in this region was opaque, and elevated by a serous effusion. Superiorly, the dura mater was adherent throughout the longitudinal sulcus. There were here evident traces of recent meningitis. On the surface of the frontal, the ascending parietal, and of the postparietal convolutions, the brain-substance had been converted into caseous matter. On cutting through the fissure of Rolando, and thus separating the hemispheres

near the centrum ovale, a nucleus of yellow cheesy-like matter was found, nearly as large as a pigeon's egg. This oval nucleus did not extend to or involve the grey central ganglia. The corpus striatum and the optic thalami of both sides were healthy. The optic nerves, the oculo-motor, and other nerves, the peduncles, and the Varolii pons were more or less shrivelled and anæmic. The author remarks that the hemiplegia must be attributed to the caseous degeneration which had taken place in the convolutions above-named, in relation with which are the centres of motion. The traces of recent meningitis cannot be accepted as sufficiently accounting for the hemiplegia, though they may be accepted as explaining the final symptoms which occurred before death, namely, vomiting, and the ocular movements above-described. No microscopic examination of the brain-tissue was made.

LITTON FORBES.

5. *Pommay on Gastric Epilepsy.*—In a recent work (*L'Encéphale*) M. Pommay publishes two cases of epilepsy, produced by digestive disturbances, and characterised by convulsive attacks accompanied by vomiting of food, followed by gastric distress, and supervening three or four hours after some departure from regimen, either in liquid or solid food. Dr. Pommay considers gastric epilepsy as a form of sympathetic epilepsy, and places it in men in the same rank as uterine epilepsy in women. His paper terminates with the following conclusions. 1. Disturbances of digestion may produce various nervous symptoms due either to paralysis, or to excitation of the vagus nerve. 2. These phenomena are of reflex origin, and occur entirely within the sphere of the vagus nerve (irritation of its sensory gastric branches, stimulation or paralysis of its cardiac branches). 3. The phenomena of stimulation are shown by epileptic attacks, and the paralytic phenomena by cardiac crises (quickened pulsation of the heart and loss of rhythm). 4. The usual condition of health of the patient seemed to have some influence on the method of response to irritation. 5. Gastric epilepsy differs from other forms of epilepsy in, *a*, the cause, that is to say, any departure from ordinary regimen; *b*, the symptoms, which are vomiting of food, in addition to the ordinary symptoms; *c*, the results, or the gastric disturbance.

6. *Lasègue on Certain Nervous Phenomena in Diabetes.*—Prof. Lasègue (*Four. de Méd. et de Chir. Prat.*, March 1882) relates several cases of syncope and apoplexy, followed by transient hemiplegia, occurring in diabetic patients. One of the cases on another occasion presented a large patch of anæsthesia on the thigh. These phenomena are apt to recur; the paralysis is usually incomplete or soon disappears.

7. *Bunce on Contagion through Domestic Animals.*—Dr. W. Bunce reports (*New York Med. Record*, March 4, 1882) two instances in which diphtheria was communicated by cats to the members of the families in which they lived.

8. *Luys on Emotional Hemiplegia.*—Dr. Luys (*L'Encéphale*, Sept. 1881) has drawn attention to the emotional condition often presented by hemiplegics, sometimes immediately, sometimes after the disease has existed for months. He has found in seven cases a lesion of the upper part of the right temporal lobe, at the bottom of the fissure of Sylvius. He suggests the existence of inhibitory zones in the brain-cortex which restrain the emotions, their destruction being followed by loss of this control.

9. *Teschemacher on Diabetes with Maniacal Symptoms.*—Dr. Teschemacher of Neuenahr (*Berl.*

Klin. Woch., Aug. 1, 1881) has recorded a case of diabetes mellitus in a young man, aged 26, who had had good health up to two years previously. His father, and mother, and sisters were living and healthy, but a maternal uncle died of diabetes. He attributed his illness to profound moral emotion caused by the death of a friend, with whom he was walking on the seashore, and who fell when scrambling over some rocks, and was picked up dead. Six months later he began to lose strength, and his medical attendant discovered sugar in his urine. He ultimately came to Neuenahr. He was a young man of feeble development, very thin, with a dry fissured tongue covered with a brown coat, scarcely any appetite, and irregular bowels; there were no abnormal physical signs. The urine was acid; the quantity in twenty-four hours was about 90 ounces, and contained 2 per cent. of sugar; there was no albumen; its specific gravity was 1033. On diabetic diet, and using the water of the spring, he gradually improved: his tongue became clean and moist, his appetite returned, and his general condition improved. The quantity of urine diminished, and the sugar varied from 0.5 to 1.5 per cent. After about three weeks, his nurse reported that the behaviour of the patient was often very strange: he would lie on his sofa muttering to himself, then spring up and run and gesticulate about the apartment, and threaten to take his life, so that she removed all cutting instruments. Five weeks later the patient desired to go home, but wished to have his urine analysed before going, and left the sample himself (it was of specific gravity 1029, and contained 1 per cent. of sugar) at the doctor's house. Three hours later, he was said to be dying, and when Dr. Teschemacher saw him, he was in a comatose state: his skin was livid, cold, and moist; his pulse small, soft, and frequent; respiration was loud and deep; the pupils were dilated, and not reacting. The nurse reported that on the previous evening the patient had been in a violent fit of rage, and had seized a knife and threatened her, and said he would murder the whole household. She, thinking he was drunk, locked him in his bedroom, where he became quiet and went to bed. In the morning he complained of not being very well, but got up and went to drink the water, and afterwards had his breakfast as usual. An hour later he complained of acute pain over the liver, vomited, and tried to get into bed, but was not strong enough to do so. On inquiry, it appeared that his bowels had not been open for five days. Sixteen hours later he died. In commenting upon this case, Dr. Teschemacher suggests that the condition called diabetic coma closely resembles traumatic shock, which, according to Goltz, is probably due to reflex paralysis of the vaso-motor nerves, especially the splanchnics, so that the blood accumulates in the great abdominal venous trunks, and leaves the peripheral vessels and other organs bloodless; hence the pallor and coldness of the skin, the weakness of the muscles. The irregularity of the heart and its temporary intermissions explain the small, irregular, compressible pulse; anæmia of the brain causes the cerebral symptoms. He attributes this to a lesion of the sympathetic nerve, and alludes to previous observers who have found changes in the sympathetic ganglia.

10. *Keraval on Pericarditis in Bright's Disease.*—M. Keraval (*l'Étude Clinique et Expérimentale sur la Péricardite Urémique*, Paris: A. Delahaye) has sought to elucidate the causation of pericarditis in Bright's disease, by injecting urea into the pericardial sacs of healthy dogs, or of dogs rendered uræmic

by ligature of the ureters, but in no case succeeded in producing pericarditis. Injection of carbonate of ammonia into the pericardium of healthy dogs was equally without result.

11. *Rendu on Hepatic Abscess*.—M. Rendu (*La France Méd.*, 7th Jan. 1882) has recorded a case of abscess of the liver cured by a single aspiration. The patient was a butcher, aged 29, who was suddenly attacked by shivering, fever, loss of appetite, pain at the pit of the stomach, lumbar pain, etc., soon followed by a swelling in the right side, which rapidly increased to the size of two fists, was round, fluctuating, and followed the movements of the liver, not passing the limits of the false ribs. Aspiration gave exit to 800 grammes (26 ounces) of brownish pus, unmixed with bile or hydatid debris; and palpation discovered a vast cavity hollowed out of the liver. After the operation, there was neither fever, nor pain, nor any reproduction of the pus; and three weeks later, the patient was cured.

ROBERT SAUNDY, M.D.

12. *Ballet on the Tendon-Reflexes in Typhoid Fever*.—Ballet (*Prog. Méd.*, October 8, 1881) finds that the spinal reflex action, especially the tendon-reflexes, is usually exaggerated in typhoid fever; never diminished, as Petit-Clerc asserts to be generally the case. In one instance which proved fatal, there were ankle-clonus, increased knee-reflex, and a kind of clonus affecting the masseters, and induced by depressing the chin. No abnormal appearance was found in the spinal cord. M. Ballet has examined seventeen cases of enteric fever, and has never found absence of knee-reflex, but nearly always exaggeration of this phenomenon.

13. *Raymond and Dreyfus on Aphasia*.—Drs. Raymond and Dreyfus (*Archives de Neurologie*, No. 7, 1882) suggest an explanation for those cases of left hemiplegia which are accompanied by aphasia. It is well known that left hemiplegia occurring in a left-handed patient is often attended with aphasia. But there are cases not capable of this interpretation. The authors give two instances in which left hemiplegia was found as usual to depend on lesion of the right half of the cerebrum. The concomitant aphasia, however, was due to softening of the third frontal convolution of the left side. They recommend that in such cases a thorough examination should be made, not only of the cortex of the speech-centre, but also of the subjacent white matter. In short, it often happens that the brain is the seat of multiple lesions; and hence it is not permissible to condemn Broca's proposition as to the localisation of the speech-centre, because left hemiplegia and aphasia co-exist in a right-handed individual.

14. *Ball on Functional Cerebral Ischemia*.—Professor Ball narrates some interesting cases in which cerebral symptoms supervened, probably in consequence of a circumscribed cerebral anæmia (*L'Encéphale*, No. 1, 1881). One patient, whose history is given in full, was attacked by sudden loss of speech without any disturbance of motion, of sensation, or of the intellectual faculties. There was no glossoplegia, but, on attempting to speak, the tongue was seized with a kind of cramp. Recovery took place suddenly without treatment. Another patient presented almost identical symptoms, but there was, in addition, complete deafness on the left side, constant and severe headache limited to the left temporal region, and marked sexual excitement. The onset of the attack was sudden, with loss of consciousness. No improvement took place. The third case was that of

a man who was abruptly seized with profound intellectual disturbance and almost complete loss of motion and sensation. There were total glossoplegia, and consequent inability to articulate. Recovery took place gradually. The fourth case was that of a young man, who suddenly became deaf and dumb after a violent fit of anger. It was found that he had also complete left hemianæsthesia, and subsequently slight left hemiplegia and facial paralysis. All the special senses were affected on the corresponding side. The deafness, however, was double. He was cured rather rapidly by the application of the galvanic current. Two relapses ensued, from which he recovered only partially. In the fifth case, the symptoms resembled those of acute dementia. The patient, a young man aged 33, was unable to perform any movement or to satisfy any natural wants voluntarily. When spoken to, he repeated the words automatically, evidently not understanding the nature of the question. There was also right hemiplegia with partial hemianæsthesia. Recovery was gradual. Professor Ball believes that these cases were dependent on spasm of the cerebral arterioles proceeding to certain regions of the brain. The author asserts that he has often discovered *post mortem* evidence of localised cerebral anæmia, without the existence of thrombosis or embolism.

W. B. HADDEN, M.D.

15. *Wood on the Identity of Variola and Vaccinia*.—Dr. Wood (*North Carolina Med. Jour.*, Jan. 1882, vol. ix) is of opinion that small-pox and cow-pox are not identical, for the following reasons. 1. Cow-pox has never by any means been converted into small-pox. 2. In the light of attempts made by careful experimenters to produce small-pox by the inoculation of the cow with small-pox virus, and of the large number of failures, together with the numerous positive denials made of the possibility of success, it may be concluded that small-pox virus is never converted into vaccine by transmission through the cow. 3. Cow-pox does not become epidemic, nor does it spread by effluvia from the human subject. 4. Structurally considered, the vesicles of vaccination and small-pox are very dissimilar; clinically, they are not unlike, but have sufficient points of difference to enable the skilled observer to distinguish between them. Dr. Wood criticises the experiments of Ceely, Badcock, and others, and gives some details of experiments made by American observers with regard to the subject. None of the experimenters succeeded in getting vaccinia from inoculating cows with small-pox matter, but on one occasion he himself had inoculated a cow with small-pox matter, and small vesicles resulted. Two children of a family were inoculated with lymph from these vesicles. The inoculation resulted in a genuine small-pox, which went through the family in various grades of intensity.

JOHN MACCOMBIE, M.D.

16. *Buzzard on Symmetrical Sciatica in a Diabetic Patient treated by Salicylate of Soda*.—Dr. Thomas Buzzard reports, in the *Lancet*, Feb. 1882, p. 302, the case of a lady, aged 68, who had for several years suffered from diabetes, and was attacked by severe and agonising pain in the course and distribution of both sciatic nerves. Three doses of 15 grains each of salicylate of soda quickly and effectually removed the pain, after morphia had failed to do so. Dr. Buzzard says this was the first case of symmetrical neuralgia, occurring in the course of diabetes, that had fallen under his notice, and thinks the rarity of the occurrence and the facility of cure in this instance worthy of notice. Dr.

Buzzard finds that Dr. Jules Worms had noticed, in 1880, the fact that symmetrical neuralgia did at times occur in combination with diabetes. Rosenstein had also advised examination of the urine in all cases of obstinate neuralgia.

17. Beale on *Hernia of the Lung through the Diaphragm*.—In the *Lancet*, Jan. 1882, p. 139, Mr. E. Clifford Beale records the case of a man aged 22, who, on August 11, 1881, fell from his cart, and received a severe injury of the chest. After prolonged suffering, he died on October 29th. The report of the *post mortem* examination is too long for transcribing, but the fact that two portions of the right lung were found amputated and lying loose in an abscess situated between the right lobe of the liver and the diaphragm invests the case with much interest. An interesting summary of what is known upon the subject of diaphragmatic hernia concludes Mr. Beale's paper. RICHARD NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. QUINTIN.—Fracture of the Olecranon. (*Centraltbl. für Chir.*, No. 48, 1881.)
2. KÜMMELL.—The Treatment of Fractured Thigh in Infants. (*Berl. Klin. Woch.*, No. 4, 1882.)
3. MASON.—Compound Fracture of the Leg. (*Med. News*, No. 1, 1882.)
4. BOZEMAN.—Removal of a Cyst of the Pancreas. (*New York Med. Record*, Jan. 14, 1882.)
5. WÖLFLE.—Iodoform in Wounds of the Mouth. (*Centraltbl. für Chir.*, Dec. 3, 1881.)
6. DUPLAY.—Trephining in Fracture of the Skull. (*Archives Gén. de Méd.*, Jan. 1882.)
7. STILES.—Treatment of Distal Dislocation of the Clavicle. (*Trans. of New York State Med. Soc.*, 1881.)
8. CHARCOT.—Deposits of Blood at the Fold of the Elbow. (*Revue de Thérap.*, 1882.)
9. GALLICO.—Extrapericardial Aneurism of the Aorta Treated by Galvano-Puncture. (*Gaz. Med. Ital. Prov. Venete*, Dec. 31, 1881.)
10. SOKOLOFF.—The Treatment of Aortic Aneurism by Sculptor's Clay. (Boikin's *Ejenedelnaya Klinitscheskaya Gaz.*, No. 33, 1881.)
11. WHITEHEAD.—The Surgical Treatment of Hæmorrhoids. (*Ibid.*, Feb. 1882, p. 148.)
12. WHEELER.—Nerve-Stretching in Traumatic Tetanus. (*Ibid.*, Dec. 1881, p. 984.)
13. SIMS.—The Treatment of Gunshot Wound of the Abdomen in Relation to Modern Peritoneal Surgery. (*Brit. Med. Jour.*, March, 1882, p. 304.)

1. *Quintin on Fracture of the Olecranon*.—In an abstract by Dr. A. Bidder, in the *Centraltbl. für Chir.*, No. 48, 1881, of a recently published pamphlet by Dr. J. Quintin of Bonn, three cases of partial fracture of the olecranon are recorded. In each of these cases, the fractured portion of the process was that in front and in contact with the humerus, the dorsal portion remaining intact. All the patients complained much of pain in the injured part. There was but moderate swelling, and in each case the forearm could be flexed and straightened, though slowly, to the full extent. In the first case, which did not come under surgical notice until the eighth day after the injury, a small projection could be felt at the margin of the olecranon, and beyond this a notch. In the second case, a shallow groove, about a line in length, could be distinctly felt on the outer margin of the olecranon, near its attachment to the head of the ulna. In the third case, slight yielding of the

olecranon, on pressure, could be made out. Partial fracture of the olecranon may be easily overlooked, and, no doubt, is often treated as a simple contusion. There is much variety in fractures of the olecranon. In many cases the process, though completely fractured, still remains in position and attached to the rest of the ulna, being fixed by the prolonged fibres of the tendon of the triceps, and also by some fibres of the internal ligament. If these tendinous and ligamentous attachments be ruptured, the olecranon becomes separated from the ulna, often to a considerable extent. In discussing the question, why, in cases of fracture of the olecranon through direct violence, the tendon of the triceps sometimes is ruptured and sometimes remains intact, Dr. Quintin refers to the following views of Professor Made-lung. If the olecranon be broken by force applied directly to this process whilst the forearm is flexed, the fracture will commence at the dorsal surface of the bone and pass forwards towards the anterior surface; and, at the same time, the prolongation of the triceps tendon over the olecranon will be torn through. If, on the other hand, the violence be applied not directly to the olecranon, but to the upper third of the forearm, the limb being flexed, there is more likely to be a fracture through one of the condyles, or a T-shaped fracture of the lower extremity of the humerus, or, again, a fracture through the olecranon, starting at its anterior and cartilaginous surface, and leaving intact the tendinous bands on the posterior surface. Dr. Quintin reports three cases of ununited fracture of the olecranon, treated according to the method recommended by Professor W. Busch in 1864. This method consists in fixing the elbow, the forearm being semiflexed, in a plaster-of-Paris splint, and then, after a 'window' has been made in this splint so as to expose the olecranon, in applying Malgaigne's hooks, with one end driven into the olecranon and the other below into the plaster splint. By working the screw, the olecranon may be brought into close apposition to the upper extremity of the ulna. Malgaigne's apparatus, when used for this purpose, is slightly modified by Busch, since, at one extremity, there is but a single hook, which is inserted into the olecranon. The two hooks left at the other extremity are inserted into the plaster-of-Paris near the lower margin of the opening made in the splint over the back of the joint. Dr. Quintin's cases show that Malgaigne's hooks, applied in this way for the treatment of ununited fracture of the olecranon, may remain for some weeks without causing inflammatory mischief; but no proof is here given that this method of treatment has any superior advantages.

2. *Kümmell on the Treatment of Fractured Thigh in Infants*.—Dr. Hermann Kümmell of Hamburg writes, in the *Berl. Klin. Woch.*, No. 4, 1882, that, for the treatment of fracture of the femur in an infant, the safest and most convenient and successful method is that of vertical extension. This method was first tried by Dr. Schede of Berlin, in 1877, and has since been carried out by this surgeon in all his cases of fractured thigh in children under two years of age, and also in some cases in which horizontal extension had failed with children between three and four. In horizontal extension, in addition to the eczema and excoriation caused through the constant soiling of the bandages by excretions, and to the great labour attending frequent renewal of the bandages, especially when it is necessary, as in fracture through the upper third of the femur, to include

the pelvis, there is the further evil of enforced frequent movement of the injured part, through which movement consolidation is retarded, and dislocation and shortening of the fractured extremity rendered probable results. In this method of treatment, a long continuous band of plaster is fixed to both sides of the injured limb, as high as the seat of fracture, and applied so as to form a free loop below the sole. This long strip is then secured in the ordinary way by circular strips of plaster and by circular turns of a bandage. The leg, having been elevated, is then kept in the vertical position, with the corresponding side of the pelvis suspended, by means of a piece of cord fixed to the loop of plaster, and either attached above to some object over the bed or slung over a pulley, with its free extremity supporting a weight. The fragments of the broken bone then fall into proper position, and remain so, if the extension be maintained until firm union is established. The little patients, it is stated, tolerate this treatment very well, and at once cease to suffer from pain in the injured thigh. Vertical extension does not necessitate constant and complete rest on the back; but Dr. Kümmell does not insist on this as one of the advantages of the method, as he is opposed to the view held by many surgeons, that prolonged rest on the back is dangerous with young patients, and that it causes pulmonary affections and disturbance of the general health. Rotatory displacement of the fragments is not to be feared as a result of vertical extension. In most of the cases observed by Dr. Schede and the author, callus has formed rapidly and in abundance; and in healthy children, it is asserted, consolidation of the fragments is usually well established by the end of the third week, when the bandage and strapping may be removed and the limb lowered. The usual result of this treatment is stated to be speedy and firm union, without displacement, and without any shortening of the injured limb. One disadvantage is mentioned as likely to occur in female infants subjected to this mode of treating fractured thigh. As a consequence of free entrance of air into the gaping ostium vaginae, the little patient may suffer from severe vaginal catarrh, which condition will persist as long as the vertical extension is kept up, but subsequently may be soon removed by careful cleansing and the local application of weak astringents. A tabular statement is appended of twenty-eight cases of fractured thigh in infants treated by this method. Of these patients, twelve were under twelve months of age, and sixteen between the ages of one and two years.

3. *Mason on Compound Fracture of the Leg.*—In a paper read before the New York Surgical Society (*Med. News*, No. 1, 1882), Dr. Erskine Mason considered especially the period of time required for repair of compound fracture of one or both bones of the leg, as well as the best method of treatment according to his own experience. In his treatment of thirty cases, he had used almost every variety of splint, and finally reached the conclusion that the plaster-of-Paris dressing in some one of its varieties, with or without brackets, applied either early or late, met the indications in the majority of cases, better than any other appliance. He had used through-drainage in connection with the plaster-of-Paris splint, and it had become with him a favourite mode of treatment. The results obtained from this treatment had been better than those which usually followed the old practice of sealing the wound. Dr. Mason then spoke of the too free use of the drainage-tube, or, at least, its too early introduction. His

observations in these cases had also led him to believe that we might, at times, have too implicit belief in antiseptic dressings, and attempt to save limbs which, as proved by results, ought to have been condemned to amputation. Of the thirty cases, there was fracture of the tibia in sixteen, of the fibula in three, and of both bones in eleven. In seven cases it was found necessary to amputate, primarily in five, of which three recovered and two died, secondarily in two, both of which recovered. Eighteen cases were treated by plaster-of-Paris dressings, either by the bandage alone or by the bandage strengthened by brackets. Of these, nine were put up at once, and nine were dressed after the lapse of some days, the average period of this treatment being twenty-four days. In the cases in which plaster-of-Paris was applied immediately after the accident, the average period of removal of the dressing was the twenty-fourth day; and, in the other cases, the thirty-eighth day. Among the eighteen cases there were four deaths, one from pyæmia on the eighth day, one from shock on the forty-first day, one from alcoholism on the seventh day, one from erysipelas on the sixty-first day. The average duration of the treatment was eighty-two days. Four cases were treated by 'through-drainage'. The average duration of treatment in these cases was forty-nine days. W. JOHNSON SMITH.

4. *Bozeman on Removal of a Cyst of the Pancreas.*—Dr. N. Bozeman reports, in the *New York Med. Record* for Jan. 14, 1882, the removal during life of a cyst of the pancreas, weighing 20½ pounds. The case is interesting from the fact that it is the first operation of the kind on record. It was mistaken for an ovarian cyst. Five years ago the abdomen began to enlarge on the left side, and gradually increased until the entire cavity was distended symmetrically. Upon opening the abdomen, the uterus and ovaries were found perfectly normal, and upon careful examination the pedicle was found attached to the junction of the outer third of the pancreas. It was transfixed and tied in the usual way. The patient was discharged cured on the thirty-eighth day after the operation.

5. *Wölfler on Iodoform in Wounds of the Mouth.*—Wölfler (*Centralbl. für Chir.*, Dec. 3, 1881; and the *Cincinnati Lancet*) says that the efficacy of the local use of iodoform in tuberculous affections of the joints, and its efficacy in the treatment of wounds where sutures are inapplicable, has recently led Professor Billroth to test its use in wounds near the natural apertures of the body, particularly since antiseptic dressings to these parts have been found unmanageable. From April to October 1881, 18 carcinomata of the tongue were removed in the Vienna clinic. In some of these cases, the third or half the tongue was excised, although in the majority the organ was removed in its entirety. In many of the cases, it was found necessary to remove part or all of the floor of the mouth to the hyoid bone. In several cases the submaxillary gland and lymphatics, as well as parts of the soft palate and pharynx, were removed. To render these extensive operations practicable, the inferior maxilla had to be divided, and in a number of cases was partially removed. To prevent excessive hæmorrhage and flooding of the field of operation, the operations on the tongue were, as a rule, preceded by ligature of the lingual and facial arteries. In all of the 18 cases, a complete cure was effected. In none of the cases was there any local disturbance, and in only a few was there any elevation of temperature except during the first few

days. Since the technicalities of the operation had not been altered, these fortunate results must be attributed to the treatment of the wounds with iodoform. The main points of this treatment can be summarised as follows. When, after amputation of the tongue and floor of the mouth, the latter communicates with the external wound through which the lingual artery was tied, a large drainage-tube is passed through this opening into the mouth. If the floor of the mouth have not been injured by the operation, Billroth no longer perforates it for drainage purposes. After the operation, a piece of iodoform-gauze, six to ten inches in length and one to two inches in width, folded upon itself, is introduced into the wound and pressed against the surface operated upon. This small piece of gauze suffices to completely and permanently keep the wound free from septic changes. The piece of gauze thus introduced after the operation clings to the wounded surface for from five to eight days. It does not come out spontaneously before this length of time has elapsed, and does not interfere with the deglutition of the patient. The iodoform gauze is prepared as follows: 60 grains of resin are dissolved in 1,200 grains of alcohol, and 50 grains of glycerine are added to this solution. Into this are placed six yards of gauze, from which the excess of solution is to be squeezed out. When this gauze is half-dried, 50 grains of powdered iodoform are dusted upon it. If the results obtained in these cases of Billroth be compared with those achieved in similar cases in former cases, it becomes apparent that in the iodoform we have a powerful means of preventing the septic changes that usually carried off patients who had been subjected to capital operations about the mouth.

6. *Duplay on Trephining in Fracture of the Skull.*—Dr. Duplay (*Arch. Gén. de Méd.*, Jan. 1882) comes to the following conclusions respecting fracture of the skull and consequent trephining. 1. Far from adding to the gravity of a wound of the skull with limited circumscribed depression and fracture of the internal table, trephining is an operation inoffensive and antiseptic in character. 2. Trephining is a simple operation, which does not require rules for guidance other than those resulting from circumstances. It is a 'cleaning up' which has the advantage of transforming a complex, not easily manageable wound, liable to gangrene, into a simple aseptic wound which can be easily treated. 3. The study of the depression may lead to some knowledge of the adjacent osseous lesions. 4. The comparison of the osseous lesions thus diagnosed and the functional symptoms observed may lead to the recognition of the nature and seat of the cerebral alterations of which the osseous lesions are the cause, and the functional troubles the result. In all injuries of the skull, the fact should not be forgotten, that an insidious change in the meninges may be set up, which would be likely to lead to serious consequences.

7. *Stiles on Retaining Dislocation of the Distal End of the Clavicle.*—Dr. Stiles (*Trans. of New York State Med. Soc.*) describes the following device for retaining dislocations of the distal end of the clavicle. The bone having been put in position, a plaster cast was taken of the parts, about 4 in. long, and $2\frac{7}{8}$ in. wide. It is necessary to oil the part before applying the plaster. Dr. Stiles took the cast to a dentist, and requested him to make a hard rubber-plate from the cast, in the same manner as he would make a plate for a set of teeth from a plaster-cast of the mouth. When it was finished, he applied a piece of

lint to the under surface of the splint and placed it on the clavicle, and found it a perfect fit. He attached to the outer or upper surface of the splint two strips of strong adhesive plaster, about 15 inches long (of the width of the two strips nearly covering the splint), which he applied to the posterior part of the chest. He then applied two more strips over those already applied, but extending in the opposite direction and diverging somewhat, and to the lower ends of these strips he fastened two India-rubber bands, about 3 in. long, and $\frac{3}{4}$ in. wide; and to the lower ends of the bands he fastened pieces of adhesive plaster with broad bases, making sufficient traction to hold the bone in place. The last-mentioned pieces of plaster were firmly fixed to the anterior part of the chest. A small roller was placed in the depression of the splint above the clavicle, and then another piece of plaster about 3 inches wide was applied from before backwards over the roller, and brought up over the roller and down on the back, and closely applied. The fore-arm was placed diagonally across the chest, and retained with adhesive strips, and a few turns of the roller, and the dressing was completed. The result was all that could be desired. There was perfect freedom of motion of the arm, and it could be put directly up beside the head as well as its fellow.

8. *Charcot on Sanguineous Deposits in the Fold of the Elbow.*—Having had the opportunity of noting five cases of sanguineous effusion in the region of the elbow, and having each time seen the hæmatoma succeeded by a tumour of a cartilaginous consistence, M. Charcot (*Rev. de Chir.*) has embodied the results in an interesting memoir. His conclusions are as follow. 1. Violence which directly affects the elbow, such as contusion, dislocation, etc., or indirectly (as sprains and diastasis), often produce considerable effusions of blood throughout the whole extent of the upper limb, and especially at the fold of the elbow. 2. These sanguineous extravasations seem to have their source in the rupture of the vessels around the joint, and especially in the tearing of the brachialis anticus muscle. 3. The effused blood is not always completely absorbed, and is transformed into fibrinous clots situated at the anterior internal side of the fold of the elbow in front of the articulation, and in the substance of the brachialis anticus. 4. The tumour thus found is as large as an egg, uneven, and of cartilaginous, and even bony, hardness. At the commencement it is independent of the bone; but subsequently may become united to the humerus. 5. The sanguineous deposits may interfere with the movements of the joint, and considerably limit flexion. 6. They generally remain stationary for a long time, and are but little influenced by ordinary treatment. 7. They may give rise to errors in diagnosis, and may be taken for exostoses of the humerus, displacement of the coronoid process, etc.

9. *Gallico on an Extra-pericardial Aneurism of the Aorta Treated by Galvano-Puncture.*—Dr. E. Gallico (*Gaz. Med. Ital. Prov. Venete*, Dec. 31, 1881) records an interesting case of aneurism of the aorta, in which galvano-puncture was resorted to as a last resource. The patient was aged 57, and, when first seen, presented a small tumour in the third right intercostal space. The continuous current from Onimus' machine was first tried, in sittings of a quarter of an hour's duration. These not producing any beneficial effects, galvano-puncture was next employed. The operation was performed six times within three months. In four of the operations three needles were employed; in the first and last, four.

After each successive application the tumour presented a remarkable hardness and consolidation in its central portions. In the intervals of treatment the tumour was covered with layers of adhesive plaster, as there appeared imminent danger of rupture. The author remarks that, though this case ended unsuccessfully, it does not shake his confidence in a method of treatment which he has more than once seen result in a cure.

10. *Sokoloff on the Treatment of Aortic Aneurism by Sculptor's Clay.*—Dr. Sokoloff reports (Botkin's *Weekly Med. Gaz.*, No. 23, 1881) the case of a patient who had a rapidly growing aneurism of the arch of the aorta, associated with severe cardiac asthma, angina, and sleeplessness. Numerous remedies usually applied in such cases entirely failed to bring any relief to the sufferings of the patient. The author proceeded then to place thick layers of moist sculptor's clay on the site of the pulsating tumour. The patient was rapidly relieved of sleeplessness and anginal paroxysms, 'thoroughly revived', and, in a few weeks, was able to return to his usual occupation. Twelve months later, examination of this patient showed that the aneurismal sac and its pulsation had considerably diminished. Dr. Sokoloff obtained the same results in some other similar cases. He remarks that it is impossible to find any other explanation of the therapeutic action of the clay than its pressure and cooling property; and he believes that 'the clay acts on cardiac neuroses as various metals do in certain cases of peripheral neuralgies'. [In the LONDON MEDICAL RECORD, July 1880, p. 284, is to be found an interesting report of Dr. Hewson's treatment of uterine fibroids by dry earth or clay.—*Rep.*]

V. IDELSON, M.D.

11. *Whitehead on the Surgical Treatment of Hæmorrhoids.*—Mr. Walter Whitehead, in the *Brit. Med. Jour.*, Feb. 1882, p. 148, describes the method in which he performs this operation, and which, from its novelty and practical value, deserves careful attention. After the patient has been carefully prepared for the operation, he is placed under chloroform in the lithotomy position, and the sphincter ani is paralysed by forcible dilatation by the aid of the two thumbs. A sponge is then passed six inches up, to prevent any faecal discharges from coming down during the operation. The hæmorrhoids are then fully exposed and carefully dissected upwards to their highest limits, as much healthy mucous membrane being preserved as possible. The hæmorrhoidal vessel is thus left simply attached by loose cellular tissue, and, being firmly grasped by ring-forceps, is twisted until it separates. The mucous membrane is then stretched to the denuded surface at the verge of the anus, and so the open wound is closed and heals by first intention.

12. *Wheeler on Nerve-Stretching in Traumatic Tetanus.*—Mr. W. I. Wheeler, in the *Brit. Med. Jour.*, Dec. 1881, p. 984, reports a case in which this treatment was carried out successfully, as he believes, for the first time in England, or at all events in Ireland. [Dr. John Lucas, in the *Med. Times and Gaz.*, Feb. 1880, p. 202, enters fully into the history and literature of this operation, which Dr. Eben Watson first advocated. At page 216, August 1880, Mr. W. Johnson Smith reports a case in which the median nerve was stretched with successful results.—*Rep.*]

13. *Sims on the Treatment of Gunshot Wounds of the Abdomen in Relation to Modern Peritoneal Surgery.*—Dr. J. Marion Sims thus sums up the results of his experience and observation in this department of surgery (*Brit. Med. Jour.*, March 1882,

p. 304). 'Finally, I have the deepest conviction that there is no more danger of a man dying of a gunshot or other wound of the abdomen, properly treated, than there is of a woman dying of ovariectomy properly performed. Ovarian tumours were invariably fatal until McDowell demonstrated the manner of cure; now 90 to 97 per cent. recover. I think we may logically draw the following conclusions from the facts previously stated. 1. Wounds of the peritoneal cavity, however made, have a common course to run. 2. They have a common termination, that is, death by septicæmia. 3. This is the general law in death from ovariectomy. 4. It is the general law in death from gunshot and other wounds of the peritoneal cavity. 5. Septicæmia in these cases is the result of the absorption of a bloody serum and other effusions found in the peritoneal cavity after wounds or operations. 6. Gunshot wounds of the pelvic cavity recover, because of natural drainage by the hack of the ball carrying off poisonous effusions and bloody serum. 7. Gunshot wounds of the peritoneal cavity die, because there is no natural drainage, and the poisonous effusions and blood fluids fall into the pelvic cavity, and are absorbed, producing septicæmia and death. 8. To evacuate this bloody fluid and other foreign effusions, it is necessary to enlarge the abdominal wound, to clear out the peritoneal cavity, to suture wounded intestines, and tie bleeding vessels, using drainage or not, according to circumstances. 9. If this operation be well done, there will hardly be need of drainage.'

R. NEALE, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BARNES, FANCOURT.—On Hour-glass Contraction of the Uterus treated by Inhalation of Nitrite of Amyl. (*Brit. Med. Jour.*, March 18, 1882.)
2. BAYER.—On the Use of Iodoform in the Lying-in. (*Centralb. für Gynäk.*, 11 Marz, 1882.)
3. CALDERINI, G.—Contribution to the Diagnosis of Foetal Monstrosity and Hydramnios. (*Annali di Ostetricia, Ginecologia, e Pediatria*, Feb. 1882.)
4. CONIGLIONE, ANTONIO.—Contribution to the Study of the Relaxation of the Pubic and Sacro-iliac Symphyses. (*Journ. de Méd. de Paris*, 25 Mars 1882.)
5. DANBRIDGE, N. P.—A Case of Ovariectomy in which a high Temperature was successfully controlled by Cold Water. (*The Obst. Gazette*, Cincinnati, Feb. 1882.)
6. DITTEL.—A new Mode of Treatment of Vesico-Vaginal Fistule. (*Wiener Med. Woch.*, No. 51, 1882.)
7. DORAN.—Proliferating Cysts in the Ovary of a Seven Months' Fœtus. (*Trans. Path. Soc.*, 1881.)
8. FENGER.—Total Extirpation of the Uterus through the Vagina. (*Amer. Journ. of Med. Sciences*, Jan. 1882.)
9. FRANK.—On the Operative Treatment of Incontinence of Urine in the Female. (*Centralb. für Gynäk.*, 4 Marz 1882.)
10. GALLARD.—On Conception during Amenorrhœa. (*Annales de Gynéc.*, Mars 1882.)
11. HERRICK, O. E.—Laceration of the Perinæum. (*The Obst. Gazette*, Cincinnati, February 1882.)
12. KOCKS.—On Total Extirpation of the Uterus. (*Centralb. für Gynäk.*, 25 Feb. 1882.)
13. MASLOWSKY, W.—On the Pathology of the Hydatid Mole. (*Ibid.*, 11 Marz 1882.)
14. MÜLLER, P.—A Modification of Vaginal Total Extirpation of the Uterus. (*Ibid.*, 25 Feb. 1882.)
15. OTT.—Apparatus for the Removal of Fluids during Permanent Irrigation. (*Ibid.*, 25 Marz 1882.)

16. PAWLIK.—Catheterisation of the Female Ureters. (*Tageblatt der Naturforsch.*, 1881, S. 179.)
17. PLANT, W. T.—Puerperal Convulsions treated with Chloral Hydrate. (*Obstet. Gaz.*, Cincinnati, Feb. 1882.)
18. RAMPOLDI.—Correlation between Sexual and Optic Disease. (*Annali Universali di Med.*, Settembre 1881.)
19. ROKITANSKY.—Elephantiasis of the Præputium Clitoridis. (*Wiener Med. Zeit.*, No. 48, 1881.)
20. THÉVENOT.—The Action of the Utero-Pelvic Muscles during Labour. (G. Masson, Paris, 1882.)
21. TURETTA.—Dermoid Cyst of the Ovary. (*Giornale Internaz. delle Scienze Mediche*, Anno III.)
22. DESPLATS.—Washing out the Uterus with Carbolic Acid. (*Four. des Sciences Méd. de Lille*, July 1881.)
23. WARREN.—Treatment of Vomiting in Pregnancy. (*Trans. of New York State Med. Soc.*, 1881.)
24. SYROMIATNIKOFF.—Prolonged Retention of the Placenta. (*Vratch.*, No. 1, 1882.)
25. LUBIMOFF.—A Case of Intrafoetation. (*Vratch. Vedom.*, No. 1, 1882.)
26. ALEXIS.—A Case of Hydatiform Mole. (*Vratch. Vedom.*, No. 1, 1882.)

1. *Barnes on Hour-Glass Contraction.*—Dr. Fancourt Barnes describes a case in which the patient, a secundipara, aged 22, had been delivered naturally, at three o'clock in the morning, of a living female child. He was sent for by a midwife of the Royal Maternity Charity at ten o'clock, because she had been unable to deliver the placenta. On examination, he found that the umbilical cord had been torn from its insertion in the placenta. The external os uteri was quite dilated, as was the cervical cavity; but the os internum, and the circle of muscular fibres above it, called Bandl's ring, the chief-seat of hour-glass constriction, were firmly contracted, and only admitted a finger, by which the placenta could be felt in the uterus. He now learnt that the midwife, hoping to accelerate the third stage of labour, had given the patient a dose of ergot as soon as the child was born. He found it impossible to get his hand into the uterus and deliver the placenta. Bearing in mind the remarkable power which nitrite of amyl possesses in relaxing tension in the blood-vessels, he determined to test its action on the uterine spasm. The patient had three drops of nitrite of amyl given her on a handkerchief to inhale, by Mr. Lingard. During the inhalation, the ring of muscular fibres round the os internum, which had been so rigid as to be absolutely undilatable, steadily yielded, until he could pass the whole hand into the uterus and detach the placenta, which was universally adherent. There was no hæmorrhage whatever, and the placenta itself presented a remarkably exsanguine appearance. On referring to the third edition of his father's *Lectures on Obstetric Operations*, he found the following: 'We possess in ergot a great, a dangerous power of augmenting the force of the uterus. We want an agent endowed with the opposite effect, that will control and suppress uterine action. I consulted Dr. Richardson on this point. He tells me the desired power exists in nitrite of amyl. Three minims of it added to one drachm of ether, taken by inhalation, is the form he recommends. It does not produce unconsciousness; but it is an anæsthetic as well as a sedative of muscular action. It is the antidote or opposite force to ergot. In it we have the desiderated epechontocic agent.' In the case in question, Dr. Fancourt Barnes found that the drug acted admirably. It relaxed the irregular contraction of the uterus, and acted as a sedative and anæsthetic, without producing unconsciousness. The case is also instructive as an example of the

dangers which may result from the administration of ergot before the expulsion of the placenta. The tetanic action was no doubt increased by the traction which had been made on the cord. It is well known that ergot, when given before the birth of the child, may cause its death. This results from the blood being squeezed out of the placenta by the uterus. Although in cases of irregular contraction of the uterus that organ is firmly contracted, the contraction does not separate the placenta. On the contrary, in the cases seen by the author, the placenta has been firmly adherent, as it was in this case. Dr. Fancourt Barnes believes that he has been the first to use nitrite of amyl to relax uterine spasm. In it, he thinks, has been found a new and trustworthy addition to the resources at our command for overcoming spasmodic or trismic contractions, which will not always yield to other remedies.

2. *Bayer on Iodoform in the Lying-In.*—Dr. Bayer refers to thirty-eight observations by Mann, in No. 7 of the *Centralt. für Gynäk.* for 1882, in which Mann recommends iodoform as an antiseptic, with which he can keep recent wounds of the vagina aseptic and, further, render infected wounds aseptic. In this way vaginal wounds would be rendered innocuous as a cause of local or general infection. He is of opinion that the results attributed by Mann to iodoform are greatly due to the fact, that Mann washes the parts with a two-per-cent. carbolic solution before sprinkling over the iodoform. Further, he states that iodoform is useless as a protective against infection, inasmuch as the layer formed by it is rapidly washed off by the lochial discharges. Bayer himself, after giving iodoform an extended trial as an antiseptic in child-bed, is of opinion that it does not diminish the morbidity, nor the swelling of the vulva, nor does it even accelerate the granulation process in the wounds. He prefers powdered salicylic acid to iodoform as an antiseptic, the only objection being that the salicylic acid is much more painful than the iodoform. The salicylic acid forms a protecting layer over bruised wounds. He concludes by referring to a paper by Schmid, in which salicylic acid is stated to present all the advantages of iodoform.

4. *Coniglione on the Relaxation of the Pubic and Sacro-Iliac Symphyses.*—The patient was a pluripara aged 31, well developed and healthy. The first pregnancy and labour were normal. The second pregnancy was also normal, but terminated by the expulsion of a fœtus, apparently dead some time. During the lying-in, the patient was attacked with plegmasia alba dolens. The labour of the fourth pregnancy was very rapid. The child weighed 3 kilogrammes. The lying-in was normal up to the sixth day, when pains came on in the right inguinal region, which spread down to the knee, being most severe at the symphysis pubis and behind at the level of the two sacro-iliac articulations. The slightest movement was impossible, on account of the intense pain which resulted. Flexion of the thighs or legs was impossible. Examination showed that the pain was very acute on pressure against the symphysis or sacro-iliac joints. On pressing alternately over the body of the pubes, a sensation of tilting was experienced, but no crepitation could be made out. When the patient was placed on her side, all attempts at moving the sacro-iliac joints excited violent pains. When the patient was placed on her back, and two fingers in the vagina pressed alternately to the right and left of the symphysis against the posterior aspect of the pubes, the sliding move-

ment of the joint was very plain. Relaxation of the sacro-iliac joints could be detected. By supporting the patient by the axillæ, and then placing a finger underneath the lower border of the pubes and making her move her legs, it was quite easy to feel each half of the pubes alternately move up and down, following the movements of the legs, at the same time causing sharp pain. The diagnosis was relaxation of the pubic and sacro-iliac articulations, provoked by an acute inflammatory process. Absolute immobility of the pelvis for three weeks effected a cure.

16. *Pawlik on Catheterisation of the Female Ureters.*—Pawlik has found that the trigonum vesicæ can be felt more or less distinctly through the fold of the anterior wall of the vagina. He made use of this knowledge to pass a sound into the bladder and to press it on to the posterior wall, so that its movements could easily be made out. The sound is now gently and carefully pushed in the direction of the trigonum and the introduction of the sound into the ureter affected. Pawlik has successfully demonstrated this proceeding on the living subject. The importance of catheterisations of the ureters, in the diagnosis of single or double disease of the kidney is, in Pawlik's opinion, obvious. He contrasts the harmlessness and ease of this method with that recently described by Gluck, in which it is advised, in the diagnosis of doubtful cases of kidney-disease, to cut down on the ureter from the lumbar region, and temporarily ligate it.

18. *Rampoldi on the Connection between Sexual and Optic Disease.*—The author divides into five groups the conditions of sexual disorder which may influence the eye-sight. 1. Hysteria is frequently associated with asthenopia and retinal hyperæsthesia; less frequently with ptosis palpebræ and retinal anæsthesia. 2. As to menstrual disorders; in amenorrhœa, conjunctivitis, keratitis with formation of phlyctenæ, episcleritis, and iritis are observed. In suppression of the menses, from varied causes, diseases of the choroid, optic neuritis, and retinitis are not unfrequent. The tendency among such subjects to glaucoma is known. The above diseases readily follow any sudden suppression of the menstrual flow. 3. Inflammatory diseases of the sexual organs are often accompanied by hyperæsthesia and neuralgia from the trigeminus, as well as by serous iritis and scleritis. 4. In the lying-in, and during lactation, the author mentions embolic panophthalmitis in addition to the most varied diseases which may result from weakness and anæmia after galactorrhœa or protracted lactation, namely, corneal ulcer, retinal hyperæsthesia, loss of accommodation, photopsia, and retinitis. 5. During pregnancy, the disturbances associated with albuminuria gravidarum are well recognised. Frequently, pregnancy exerts an unfavourable influence on pulsating exophthalmos. Signor Rampoldi points out the influence which hæmorrhages exert on the visual power. Amblyopia or amaurosis often appears from about the third to the fourteenth day after the loss of blood.

FANCOURT BARNES, M.D.

22. *Desplats on Washing-out the Uterus with Carbolic Acid.*—M. Desplats, in the *Four. des Sciences Méd. de Lille*, July 1881, p. 452, demonstrates all the advantages which may be obtained from carbolised washings out of the uterus after delivery. The conclusions of his paper are as follows. 1. When febrile symptoms supervene after delivery, it is desirable, even if there be nothing to indicate the existence of uterine accidents, to examine the patient with the speculum, and to make sure that

there are no septic products in the uterus. 2. If the existence of septic products be established, the uterus must be washed with a solution containing a one-hundredth part of carbolic acid. The washing-out should be continued until the injected liquid returns perfectly clear. 3. The washing-out should be done twice a day, and should be continued until the fever is entirely reduced and the uterus resumes its normal position. 4. If the fever be intense, it is desirable to leave in the cavity of the uterus a certain quantity of the carbolised solution, which will have the effect of rapidly lowering the temperature and ameliorating all the other febrile symptoms.

23. *Warren on the Vomiting of Pregnancy.*—Dr. Warren (*Trans. of New York State Med. Soc.*, 1881) concludes a paper on hystero-neurosis of the stomach as follows. 'The treatment of the vomiting in pregnancy resolves itself into the correction of all disturbances, functional or organic, as far as possible, which are known to excite dyspeptic symptoms, before a simple irritation becomes a confirmed gastritis, and the stomach refuses to receive the remedies most appropriate to relieve the original trouble. Among these, oftener than any other, the emotional element, and a constipated habit, with its attendant flatulence and other discomforts, accompany the pregnant state, and should receive early and prompt attention. For the relief of the former, no remedies equal in efficiency at this time the bromides of sodium and potassium, administered in full doses. In order to secure their full effect, these medicines must be administered at the proper time, generally late in the day or at bed-time, and when the stomach is empty. The constipation can be overcome by any simple laxative, as compound liquorice powder, or any other harmless medicine or formula; or, if it be obstinate, copious and repeated enemata of tepid water will unload the rectum of the hardened fæces or scybala, which frequently occur in women. Finally, when all other causes are excluded, the constipation relieved, and the emotional element controlled, and when we come to consider the purely sympathetic disorder following conception; in short, when we have to deal with the uncommon vomiting, due simply and solely, as far as we can see, to the impregnation of a healthy uterus in a healthy woman, I have found many of the remedies which have been called specific to sometimes relieve, but oftener to fail. But the one remedy which in my hands has before all others proven the most efficient for alleviating the distress, if not for curing the complaint, is Fowler's solution of arsenic, administered in drop-doses upon an empty stomach. When thus given, and with a restricted diet, it has seemed to me to come nearer a specific for this neurosis than any other. Indeed, the effect is at times almost magical, and, when continued for a considerable period, and given in larger doses when the stomach contains food, affords, in my opinion, a nerve-tonic highly essential to women in pregnancy, and which no other remedy can equal or approach. Frequently, however, after its continuance for a considerable time, benefit comes from suspending its use, and substituting nitro-muriatic acid with tincture of nux vomica, particularly if there be any inactivity of the liver or kidneys, or if anorexia exist.'

24. *Syromiatnikoff on Retention of the Placenta.*—Dr. Syromiatnikoff relates the following case in *Vratch (Physician)*, No. 1, 1882. A peasant woman, aged 30, miscarried, being about four months pregnant. There was very little *post partum* hæmorrhage. In a week, she got up and went about her

usual work. At the end of the fourth week after abortion, she walked from her village to Moscow, the distance being nearly 35 miles. The result of this exertion was a very severe flooding; and ultimately the patient was brought to the University Hospital in an unconscious, almost bloodless, and pulseless state. On examining the genitals, the author found the uterus enlarged and the os patulous, loosely grasping the placenta. The removal of the latter proved easy; the hæmorrhage never returned, and, twelve days later, the patient walked home. The placenta, which was removed entire, was 7 centimetres long, and, in spite of its having been retained in the uterus twenty-eight days, did not bear the slightest trace of decomposition or offensive odour, but it was rather contracted and indurated; its uterine surface was covered by fresh blood. There were no old clots nor deposits on it or in the cavity of the uterus. On duly considering this case and others, the author objects to the theory of non-interference (Ruysch and Hervieux), and ardently insists on immediate removal of the retained placenta. As to the method of removal, Dr. Syromiatnikoff, following the teachings of the St. Petersburg obstetrical school (Professors Krassovsky, Horvitz, and Slaviansky), considers every instrumental aid here utterly unnecessary, and successfully removes the placenta by means of his fingers alone. The same author highly recommends the treatment of collapse by alternate hypodermic injections of an ethereal solution of camphor (camphoræ, gr. x; ætheris, ʒj), and pure cognac; several Pravaz's syringefuls of each being given in succession. The former solution rapidly improves the pulse, and the latter supports this improvement for a long time. Sometimes he injected as many as twenty syringefuls of both remedies within an hour. Invariably successful in his efforts to revive his patients, he never saw any abscesses or indurations as sequels to such injections. [Lately there have appeared a series of similar cases. Dr. W. Nicholson saw twenty-two days' retention (*Lancet*, July 16, 1881, p. 122); Dr. E. H. Jacob reported a rare case of seven months' retention (*Ib.*, Aug. 27, p. 374); Dr. Edis describes a case of fourteen weeks' duration (*Ib.*, Nov. 5, p. 817). A year or two ago, five or six cases of unusually prolonged retention of the placenta were published in the *Brit. Med. Jour.*—*Rep.*]

25. *Lubimoff on a Case of Intrafœtation.*—At a meeting of the Kazan Medical Society (*Vratch. Vedomosti*, No. 1, 1882), Dr. Lubimoff showed a very interesting case of *fœtus in fœtu*. In a female child, born alive at full term, there was found a subcutaneous perineal tumour, the right half of which was dense and the left soft. On *post mortem* examination, the author discovered that the left half of the tumour contained two cysts; the right enclosed various parts of another fœtus, namely, a fully developed foot with six toes, a rudimentary upper extremity, and a stomach. Between two divisions of this tumour were found two small dermoid cysts, with cubic epithelial cells, striated muscles, pieces of cartilage, and bones (with marrow).

26. *Alexeeff on Hydatidiform Mole.*—Dr. Alexeeff of Nijni-Novgorod reports (*Vratch. Vedom.*, No. 1, 1881) a third case of hydatidiform degeneration of the ovum (*myxoma multiplex chorii*). His first two cases were published in *Vratch. Vedom.*, 1878, Nos. 265 and 288. A peasant woman, aged 32, married 11 years, mother of 8 children, had signs of incipient phthisis. At the third month of the ninth

pregnancy, after hard muscular exertion (she was a laundress), there appeared abundant hæmorrhage from the genitals. The hæmorrhage became persistent, severely exhausted the patient, and, two months afterwards, compelled her to enter the author's hospital. On examination, Dr. Alexeeff detected very marked tenderness of the fundus of the uterus. The os uteri was swollen, and admitted only the first phalanx of a woman's little finger. During gynæcological examination, the patient constantly started, and complained of pains in her womb. From the vagina, sanguineous secretion incessantly oozed. Abundant hæmorrhage returned every night, but was now controlled, to some degree, by the internal administration of Haller's acid elixir and Bonjean's ergotine. Though there was no 'characteristic appearance of white currants floating in a red jelly' (Angus Macdonald), the author suspected that he had to do with a case of mole, and, in the presence of the grave general state of the patient, proposed to produce abortion, which was repudiated on her part. Fortunately, at the end of the fifth month after her last menstruation, there suddenly appeared labour-pains, which, within a few hours, expelled piece-meal an enormous hydatidiform mole, accompanied by a number of recent blood-clots. The patient afterwards rapidly recovered, and twelve days later left the hospital. On examination of the expelled ovum, the author found that it consisted of a number of cysts, the size of which varied from a millet-seed to a walnut, and enclosed the normally formed foetal liver (weighing 2 ounces), and the heart (about 1 ounce), with distinct papillary muscles. Both foetal organs were softened, easily friable, and, under the microscope, presented no normal structure, but 'only detritus, an aggregation of formless, reddish-yellow granules, heaped in separate piles'. [Cases of uterine hydatids are very rare, as it was recently statistically shown by Dr. More Madden. According to his data, in 31,036 cases admitted into the Dublin Lying-in Hospital, there were only 5 instances of hydatidiform mole, being in the proportion of 1 in 6,207 (*Obstetrical Jour.*, Jan. 1, 1880, p. 44).—*Rep.*]

V. IDELSON, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1. TAPPEINER.—Absorption in the Stomach. (*Zeits. für Biol.*, Band xvi.)
2. DUMONT-PALLIER.—On Hypnotism. (*Le Progrès Méd.*, No. 2, 1882.)
3. SEEGEN.—Action of the Liver on Peptone. (*Pflüger's Archiv*, Band xxv.)
4. SENATOR.—The Renal Secretion. (*Verhandl. der Phys. Gesellsch. zu Berlin*, 1881-82, No. 6.)
5. JÆGER.—The Body-Temperature of Healthy Individuals. (*Deutsches Archiv für Klin. Med.*, Band xxix.)
6. PRUDDEN.—The Transplantation of Cartilage. (*Amer. Jour. of Med. Sciences*, Oct. 1881.)
7. LUCHSINGER.—The Venous Pulsations in the Bat's Wing. (*Pflüger's Archiv*, Vol. xxvi.)
8. SPILMAN and LUCHSINGER.—Action of Atropia on Smooth Muscle. (*Pflüger's Archiv*, Vol. xxvi.)
9. LEWASCHEFF.—The Relation of the Peripheric Vaso-Motor Centres to the Temperature. (*Pflüger's Archiv*, Vol. xxvi.)
10. ENGELMANN and VON STERSON.—The Influence of Local Injury on the Electric Irritability of Muscles. (*Pflüger's Archiv*, Oct. 1881.)

11. MARTIN and SEDGWICK.—The Mean Pressure and the Characters of the Pulse-Wave in the Coronary Arteries of the Heart. (*Four. of Phys.*, 1882.)

12. SEWALL.—The Polar Effects of Weak Induction-Currents on Nerves. (*Four. of Phys.*, 1882.)

13. GUÉRIN.—The Contractility of Tendons. (*Acad. des Sciences de Paris.*)

14. SECRÉTAN.—The Friction-Sound of the Knee-Joint.

1. *Tappeiner on Absorption in the Stomach.*—H. Tappeiner (*Zeitschr. für Biol.*, Band xvi, s. 497) ligatured the pylorus of fasting cats and dogs, and introduced by the stomach-tube solutions of substances capable of easy quantitative estimation. In one experiment upon a dog, after three hours and a half, 1.63 grammes out of 1.73 grammes of grape-sugar were recovered; of 0.568 grammes of sulphate of soda, 0.477 were found; in another experiment on a cat, after three hours, of 1.28 grammes of grape-sugar, 1.25 were recovered; and, of 0.670 gramme of taurin, 0.594 gramme remained. Peptone, also, was very slightly absorbed; of 10.7 grammes introduced, 9.6 were not absorbed. Strychnia produced its effects very slightly when the pylorus was ligatured; but the results were very different when weak alcoholic solutions were substituted for watery solutions. A cat, weighing 2 kilogrammes, with ligatured pylorus, died ten minutes after the introduction of 0.04 gramme of strychnia, dissolved in 5 cubic centimètres of a 90 per cent. alcoholic solution, and 15 cubic centimètres of water, while another weighing the same lived three hours after 0.1 gramme of strychnia dissolved in 70 cubic centimètres of water. Subsequent experiments were modified by obstructing the pylorus with an India-rubber air-pad instead of the ligature. While 6.5 grammes of chloral-hydrate in water caused deep sleep in ten minutes if the pylorus were open, the same or a larger dose proved without effect when it was closed. Alcoholic solutions of chloral-hydrate acted as quickly, but not constantly, when the pylorus was shut as when it was open. Watery solutions of grape-sugar were not absorbed at all; alcoholic solutions only a little. Two-thirds of the alcohol itself disappeared by absorption.

2. *Dumontpallier on Hypnotism.*—M. Dumontpallier (*Le Progrès Méd.*, No. 2, p. 25) has observed in some cases of hysteria during the hypnotic sleep, such excessive muscular excitability, that when one end of an India-rubber tube, 5 or 6 mètres in length and 1 centimètre in diameter, was applied over a muscle of the lower extremity while the other was connected with a watch beating the seconds, each beat of the watch provoked a faint muscular contraction. The telephone produced similar results; and, if a microphone were introduced into the circuit, artificial light, or simply looking at this instrument, caused muscular contraction.

3. *Seegen on the Action of the Liver on Peptone.*—Seegen (*Pflüger's Arch.*, Band xxv, p. 165) has investigated the action of the liver on peptone, to see whether it could split up the latter into sugar or other hydrocarbons. Broken up liver was mixed with peptone solution, and kept at a temperature of 62 deg. Cent. (143.6 Fahr.) for from one to ninety-six hours, and the result controlled by another experiment in which distilled water took the place of the peptone solution. He found that there was a large increase of sugar and hydrocarbon when peptone was present, much greater than when only distilled water was used.

By prolonged digestion, the sugar disappeared with production of acids. Other organs—kidney, lung, and spleen—did not show this action on peptone.

4. *Senator on the Renal Secretion.*—Senator (*Verhandl. der Physiol. Gesellsch. zu Berlin*, Jahrg. 1881-2, No. 6) has recently reviewed the various theories which have been put forward during the last few years with respect to the share taken by the various parts of the apparatus in the kidney for separating the different elements of the urinary secretion. His conclusion affirms those views which have found general acceptance in this country. He believes that the blood-pressure determines the rate of secretion from both the Malpighian tufts and the epithelium of the tubules. He regards the process in the Malpighian body as one of simple filtration, and rejects the view that the epithelium covering the tuft acts as a secreting parenchyma. He thinks we must admit that some water is secreted, together with the salts, by the epithelium of the convoluted tubules. A certain amount of albumen may be present accidentally as a transudate through the walls of the Malpighian tuft. He thinks the following factors determine its presence; the condition, especially the thickness of the membrane, the concentration of the solution (*i.e.*, the blood), its saline contents, its temperature, and the filtration-pressure. The urine, according to Senator, is a mixed solution, the result of, in part, transudation from the blood-vessels, in part of secretion by the glandular epithelium of the kidney. ROBERT SAUNDBY, M.D.

5. *Faeger on the Body-Temperature of Healthy Individuals.*—This writer details (*Deutsch. Archiv für Klin. Med.*, Band xxix, Heft 5 and 6) the results of certain comparative experiments made by him on the temperature of individuals labouring and resting throughout the day. For the first, he employed soldiers engaged in a regimental bakery from 4 A.M. to 4 P.M.; and, for the second, soldiers lying in bed at perfect rest. In both cases, the rectal temperature was taken every two hours throughout the day. The daily mean for the resting soldiers lay between 99.2 deg. Fahr. and 98.5 deg. Fahr., the average being 98.8 deg. Fahr. The daily mean for the labouring soldiers lay between 99.5 deg. Fahr., and 98.6 deg. Fahr., the average being 99 deg. Fahr. The two averages, therefore, tally very closely. This, however, is not by any means the case when we compare the daily oscillations in the two classes. The difference between the highest and lowest temperatures was, in the case of the resting soldiers, from 1.3 deg. Fahr. to 2.5 deg. Fahr., and on an average 2.2 deg. Fahr. The difference in the case of the labouring soldiers was from 3.4 deg. Fahr. to 5 deg. Fahr., and on an average 4.7 deg. Fahr., that is, the oscillations above and below the normal were very much greater in the labouring soldiers. The highest temperature in a healthy resting soldier was 100.2 deg. Fahr., the lowest 97.2 deg. Fahr. In all the labouring soldiers, on the other hand, the rectal temperature rose during labour to 100.4 deg. Fahr., and over. The highest temperature observed in a healthy labouring soldier (during labour) was 101.1 deg. Fahr., the lowest temperature in a healthy labouring soldier (during the interval free from labour) was 96 deg. Fahr. There is thus, in labouring individuals, a compensation, so that the average temperature is very nearly that of resting individuals. JAMES ANDERSON, M.D.

6. *Prudden on the Transplantation of Cartilage.*—Dr. T. Mitchell Prudden, director of the physiological and pathological laboratory of the Alumni As-

sociation of the College of Physicians and Surgeons of New York, has recently made some experimental studies on the transplantation of cartilage, which are published in the *American Jour. of Med. Sciences* for Oct. 1881. This paper is illustrated by drawings from microscopic sections of the prepared tissue, and forms an instructive and valuable contribution towards the solution of the question of the origin and life-history of animal cells. Dr. Prudden has found, as a result of his experiments, that in the rabbit the cells of pieces of cartilage, transplanted alive, may live on unchanged in their new situation for many months; or that they may lead to the new formation of embryonal cartilage; or that they may, on absorption of the basement-substance, change their shape and size; or that they may undergo active proliferation, and take part directly in the formation of young forms of connective tissue, similar to those produced by cells from other sources. He finds, also, that pieces of cartilage, in which the cells are killed before transplantation, may be entirely absorbed by means of cells and blood-vessels from the young connective tissue which encapsules them; and that this same process of external absorption occurs hand in hand with the internal absorption in fragments whose cells are transplanted alive.

7. *Luchsinger on the Venous Pulsations in the Membrane of the Bat's Wing.*—The author shows (*Pflüger's Archiv*, vol. xxvi, p. 445) that the rhythmic pulsations of the veins of the bat's wing continue after section of the brachial plexus, of the nerves of the wrist-joint, and of all the tissues, with the exception of the vessels, these having been treated with ammonia in order to interrupt any possible communication of the nerves with the centres. The pulsations are, therefore, assuredly of peripheral mechanism. After simple amputation of the wing, the pulsation still continued for a short time; after amputation below a ligature in order to confine blood in the vessels, pulsation continued longer, ten to fifteen minutes. With artificial circulation of defibrinated blood, venous pulsations continued in the amputated limb for as long as twenty hours, and the author shows that in this case, as in that of the heart and ureter, the intravascular fluid must be under pressure to produce contractions, as if mechanical extension were the excitant of the contractile wall. These experiments constitute a peremptory proof of the local nature of the rhythm; but they leave untouched the question of its dependence on ganglia or peripheral centres.

8. *Spillman and Luchsinger on the Action of Atropia on Smooth Muscular Tissue.*—According to the authors (*Pflüger's Archiv*, vol. xxvi, p. 459), atropia acts on smooth muscles (oesophagus of birds; lower fourth of oesophagus of cats), and not on striped muscle (oesophagus of rabbits; upper three-fourths of oesophagus of cats). From these facts, added to the absence of dilatation by atropia in the striped-muscle irides of birds and reptiles, the authors conclude, in contradiction of Von Bezold's opinion, that atropia acts selectively on intrinsic ganglia, and that the drug is a specific poison towards smooth muscle fibres or the nerve-terminations therein.

9. *Lewascheff on the Relation of the Peripheric Vaso-Motor Centres to Temperature.*—The author (*Pflüger's Archiv*, vol. xxvi, p. 60) subjects to renewed experimental inquiry the contradictory statements regarding the action of heat and cold on the vessels. According to most observers, the primary

effect of cold is constriction, that of warmth dilatation. According to the later observations of Dziedzjusz, the reverse is the case, namely, constriction in a medium above 15 deg. Cent. (59 deg. Fahr.), dilatation below 15 deg. The author experimented upon amputated limbs of dogs, in which an artificial circulation of defibrinated blood was maintained. Nerves and muscles then remained excitable at the end of eight to ten hours, during which period spontaneous contractions were occasionally observed; he judged of the calibre of the vessels by pressure, by rapidity of outflow, and by temperature. He comes to the conclusion that increase of temperature causes dilatation, diminution of temperature, and constriction; and that the greater the increase, the greater the dilatation, and the greater the diminution the greater the constriction. These results did not obtain with dead limbs, and the changes were, therefore, due to vital activity of the arterial walls. In order to determine the share in the changes of vaso-motor fibres and centres, the author experimented on limbs of which the nerves had been cut a month previously to ensure their complete degeneration; the changes were as before. Seeing that Samkovy and Gruenhagen (*Archiv*, 1874, p. 399; and 1879, p. 165) have shown that smooth muscle relaxes with diminution of temperature, and contracts with increase of temperature, the author attributes the above changes to peripheral centres, and not to direct action on the arterial muscle.

10. *Engelmann and Von Sterson on the Influence of Local Injury on the Electric Irritability of Muscles.*—Biedermann (*Wien. Akad. Sitzungsber.*, vol. lxxix, p. 289) showed that the sartorius of a curarised uninjured frog reacts first at closure, when the current is descending, at opening when it is ascending; and that this depends upon the smaller sectional area of the lower than of the upper end, and consequent greater current density where the descending current leaves and where the ascending current enters the muscle. He also showed (vol. lxxx, p. 367) that the electrical excitability of curarised muscle is much diminished by local injury; if one end of the sartorius be killed by mechanical, thermic, electrical, or chemical agency, the excitability is diminished to closure when the current leaves by the injured end; to opening, when the current enters by that end. These facts afford an additional and striking proof of Pflüger's polar law, that closure excitation takes place at the cathode, opening excitation at the anode, the above changes being due to diminished excitability near the injured point. Engelmann (*Pflüger's Archiv*, Oct. 1881, p. 97) shows that the same phenomena hold good in the case of the heart. His experiments show that the contractions of the cardiac muscle, excited by closure of a current, always start from the point where the current passes from living tissue into bounding medium, viz., at the cathode, whether that bounding medium be tissue killed by injury or any other conductor. He finds that immediately after an injury to the heart-substance, the excitability is much diminished to closure of a current leaving the heart at that part, whereas a current in the opposite direction has the same effect as before injury. He attributes the diminution of excitability to shock of the still living substance contiguous with dead substance, and finds that the diminution is followed by gradual recovery of excitability, which he attributes to death of the weakened substance, and consequent cathodic excitation in substance further from the injury. He considers that the cells composing the muscle-substance,

though in life associated so that the process of excitation is transmitted from one to the other, are independent in their death; each can die by itself, though each cannot live by itself. It is thus possible that when cells are dying, the cathode is at a weak living part; whereas, when these cells are dead, there is a new demarcation surface between living part and medium, and the cathode is at a comparatively normal part. He has followed the development of this demarcation by the galvanometer; the apparent negativity of the injured, in relation to an uninjured, point progressively diminishes with the development of the demarcation. The author now finds that the course of this diminution of negativity is nearly parallel with the re-establishment of excitability; the observed excitability is always equivalent to the maximum excitability at any point of the injured surface, whereas the observed negativity of the surface is the mean of the negativity of every point. He finds, correspondingly, that the excitability recovers its maximum sooner than the negativity of the cut surface reaches its maximum. These experiments bring new evidence in favour of the idio-muscular excitability of the heart, and of the absence of motor nerves in the heart's apex, since we have evidently to deal with direct muscular excitation, otherwise the heart ought to behave like any other nerved muscle and contract *in toto*, whether the outlet of current were weakened or not. Curarised sartorius differs from the heart-muscle in that the local excitability, depressed by injury, does not recover, the process of dying progressing from the injured point throughout the fibre, so that the cathode is always at a boundary between dead and dying, but still irritable muscle. The sartorius, subcutaneously divided, and so left to the repairing influence of circulation and innervation, recovers its original excitability. Break of a galvanic current brings about far less, certain results than does the make. The author finds (in contradiction to Biedermann) that the excitability to break of a current, which enters at the injured part, is temporarily increased with curarised sartorius, as with the apex of the ventricle.

11. *Martin and Sedgwick on the Mean Pressure and the Characters of the Pulse-Wave in the Coronary Arteries of the Heart.*—This paper (*Four. of Physiol.*, 1882, p. 165) gives an account of experiments undertaken in order to test the theory of Thebesius, a theory which has been independently propounded by Brücke and by Garrod, that the aortic semilunar valves cover the mouths of the coronary arteries during systole; so that the blood can enter these vessels only during the ventricular diastole, although it is admitted that the jet of blood from a cut coronary artery is synchronous with systole. Using the graphic method, the authors obtained simultaneous tracings of the carotid and coronary pulsations, which show that the pressure-waves in the two arteries are synchronous, any modification of the carotid pressure (as by dyspnoea) being accurately reproduced on the coronary tracing. The pressure in the latter vessel, as in the former, depends, therefore, on the aortic pressure, without being, as Brücke supposed, obstructed during systole by the semilunar valves.

12. *Swall on the Polar Effects upon Nerves of Weak Induction-Currents.*—The author (*Jour. of Physiol.*, 1882, p. 175) examines, on 'nerve-muscle' preparations, the influence of a very weak induction-current (insufficient to contraction) upon the excitatory effect of a simultaneous submaximal induction-current passing through a separate pair of electrodes. The analysis of his statements shows that the excita-

tory effect of the efficient current (which proceeds from the cathode) is increased when that cathode is in the neighbourhood of the cathode of the inefficient current, diminished when it is in the neighbourhood of the anode of the same current. These modifications, obtained whether the 'efficient' electrodes be above or below the 'inefficient', were more pronounced the shorter the distance between the 'exciting' and 'modifying' electrode, and failed entirely with a time-interval between the two currents of 0.001 second.

A. WALLER, M.D.

13. *Guérin on the Contractility of Tendons.*—M. Jules Guérin in 1856, in a memoir presented to the Academy of Sciences in Paris, attempted to prove that tendons are contractile. At a recent meeting of the Academy, he asserted that tendinous contraction belongs to the same order of phenomena as muscular contraction. Muscular contraction is both voluntary and involuntary: tendons possess identical properties. M. Guérin says that tendons appear to be only the prolongation of muscles, but, considered anatomically, they are the result of muscular fibres closely pressed together. M. Flourens has demonstrated the existence of nervous sensibility. M. Pappenheim in 1861, and M. Sappey in 1866, discovered the presence of nerves in tendons. M. Guérin believes them to be the prolongations of muscular nerves. M. Guérin reserves for a future memoir the definition of the true character of involuntary tendinous contraction, which, generally placed in the category of reflex movements, was described by M. Guérin in his original memoir as *contraction de résistance*.

14. *Secrétan on the Friction-Sound of the Knee-Joint.*—M. Secrétan, in a recent note read at the Biological Society of Paris on the 'Frottement de l'Articulation du Genou', stated that a crackling noise or friction-fremitus is heard in the knee-joint in its normal condition, comparable to that of chronic arthritis at its onset, or of pleurisy. This is indicated by a crepitus easily provoked by the following means. The legs are crossed and flexed; the upper leg hangs down, and is slowly lifted up, the patella at the same time being grasped by the other hand. When the limb is in a position of semi-flexion, the posterior face of the patella is in direct contact with the femoral pulley, and the friction-fremitus is very distinctly heard.

W. VIGNAL.

NEUROLOGY.

RECENT PAPERS.

1. TURNBULL.—General Paralysis at the Age of Twelve. (*Jour. of Men. Science*, Oct. 1881.)
2. SIEMENS.—Ergot in Epilepsy and Insanity. (*Archiv. für Psychiatrie und Nervenkrankh.*)
3. SÉGUIN.—Early Diagnosis of some Organic Diseases of the Nervous System. (*New York Med. Rec.*, 1881.)
4. GIRMA.—Hallucinations in General Paralysis. (*Thèse de Paris*; and *Gaz. Méd. de Paris*.)
5. SINKLER.—Chorea in the Aged. (*Jour. of Nervous and Mental Dis.*, July 1881.)
6. CHARCOT.—Paralysis Agitans and Senile Trembling: Static Electricity in Hysteria. (*Jour. de Méd. et de Chir. Prat.*, Oct. 1881.)
7. CAVAFY.—Nerve-Stretching in Locomotor Ataxy. (*Brit. Med. Jour.*, Dec. 1881.)
8. MÜLLER and EBNER.—Nerve-Stretching in Peripheral and Central Lesions. (*Wiener Klinik*, vii Jahrgang, Heft 7.)

1. *Turnbull on a Case of General Paralysis at the age of Twelve.*—Dr. A. R. Turnbull (*Journ. of Men. Science*, Oct. 1881) reports a case of general paralysis in a boy at the early age of twelve years. The mental symptoms consisted of loss of memory, but there were no delusions, no excitement, no depression, and no exaltation, except that the feeling of *bien être* was well marked. The boy was stout but flabby, and undersized, looking younger than his real age, which was eighteen on admission. There were very distinct motor symptoms. The articulation was defective. There were tremors of the tongue and lips; the pupils were much dilated, irregular in outline, and very sluggish in their action under light. The patient had, up to the age of ten, been healthy, and was regarded as being above the average in intelligence. At ten years of age he had an attack of hemiplegia, which passed off in about a week. His relatives observed that this left a certain amount of stupidity behind. From the age of twelve the mental weakness was observed to increase gradually but distinctly, and continued to become more and more marked until his admission to the asylum. The patient ultimately died on Dec. 23, 1879, the *post mortem* appearances fully corroborating the diagnosis made during life. A few months after the death of the son, the father was admitted to the asylum, and, in his case also, the disease proved to be general paralysis. The patient's mother had an epileptiform attack before one of her confinements. Dr. Turnbull remarks that this case is unique, in being one of general paralysis at an earlier age than any previously published instances on record. Dr. Clouston has reported one at sixteen, Guislain one at seventeen, and another has been recorded at the Royal Edinburgh Asylum at twenty. The influence of heredity in the development of this disease is still a much disputed point. In this case, the father died of general paralysis after the son had died from the same disorder. Did the influences which produced the disorder in the father occur sufficiently early in his life to affect his offspring? Statistics vary greatly on this point. The Commissioners in Lunacy, in their Report for 1878, estimate hereditary influence at 8.4, whilst Dr. Grainger puts it as high as 47.6, Dr. Macdonald at 36, and the Royal Edinburgh Asylum case-books at 40.7. [The reporter has had under his care an idiot born from a general paralytic, and also a case of hysterical mania, whose father died of general paralysis.—*Rep.*] A third point of great interest in this case is the history of an attack of hemiplegia at ten, the mental symptoms not appearing till the age of twelve. [In the last case of general paralysis in which the reporter was consulted, there had been an attack of hemiplegia five years before the mental symptoms were manifested. The relations, and even the family medical attendant, were much surprised on being informed that the disease was general paralysis, saying, 'Oh, yes, he was paralysed before (referring to the hemiplegia), but he is surely not so now'. This illustrates the necessity for teaching that much-neglected branch of medicine—psychology—more thoroughly in our medical schools, which might possibly prevent the confusion often existing in the medical mind between progressive muscular atrophy and general paralysis of the insane.—*Rep.*]

H. SUTHERLAND, M.D.

2. *Siemens on Ergot in Epilepsy and Insanity.*—In the *Chicago Med. Review*, Sept. 1881, it is remarked that it is rarely that an *à priori*

notion in medicine receives such a powerful confirmation by clinical experience, as has been recently given to the suggestion of ergot as a remedy in insanity, by the observations of a German alienist. Dr. Siemens (*Archiv für Psychiatrie und Nervenkrankheiten*) describes several cases of mental disturbance resulting from the accidental ingestion of ergot in rye-bread. The chief symptoms were: pupils greatly dilated, occasionally unequal, apathy, fits of sudden excitement with violent tendencies, genuine epileptic attacks, preceded by a short aura of teeth-chattering and yawning; the convulsive stage, accompanied by complete unconsciousness, lasted about fifteen minutes and less. After the attacks, the mental state was worse than it was before them. In one case, the so-called psychical equivalent of Samt took the place of the convulsions. One of the ten patients died in a cataleptic condition, the others recovered spontaneously, for bromides administered did not exert the slightest influence on the attacks. It seems from these observations, and they are confirmed by older ones less accurately made, that ergot in over-doses is capable of producing a true epilepsy as it were, even to the extent of provoking the epileptic mental states. Many years ago Echeverria recommended the combination of ergot and conium with the bromides, in the treatment of obstinate cases of epilepsy. The theory of the administration of the former drug was not clearly expressed by him, but he appeared to have in view a presumed tendency to cerebral congestion. The neurological editor of the *Review* has for some years (*Physician and Pharmacist*, August 1879) given ergot, both in combination and alone, for epilepsy, on an entirely different theory, one which seems to harmonise more with the facts observed by Siemens. Ergot produces cerebral anæmia, with a relative hyperæmia of the lower centres of the isthmus. Exactly the same phenomenon occurs in the initial stage of the epileptic attack. It is therefore proper to assume that in epilepsy there is an excessive excitability of the same vaso-motor centre which is subject to the influence of ergot. Now, frequent excitation diminishes the excitability of a centre under certain circumstances. The theory as to the action of ergot upon the epileptic attack is, in consequence, that, administered in doses varying for each patient between the wide limit of five drops to four grammes of the fluid extract, at intervals graded according to the frequency of the epileptic attack, the drug produces a lesser degree of the same condition which constitutes the epileptic attack, and that, by a series of artificial slight discharges, the full discharge of the epileptic attack is anticipated.

3. *Seguin on the Early Diagnosis of some Organic Diseases of the Nervous System.*—Certain symptoms are given (*New York Med. Record*, 1881), by attention to which a comparatively early diagnosis may, in the author's opinion, be made in three diseases.—1. *Locomotor ataxy* should be diagnosed before the ataxic period by the peculiar pains, by the abolition of certain reflex actions—chiefly that of the pupil to light and the tendon-reflexes; and by the occurrence of paralysis of the ocular muscle. 2. *Paralytic dementia* may be foretold by tremors or fibrillary contractions in certain groups of muscles—specially those of the tongue, face, and arm; by a tremulous, thick, and vibrating speech; by inequality of the pupils; and by dementia, which often precedes the paralysis. 3. *Tumour of the brain* seated anywhere in the motor area is indicated by localised

spasm, which after a time may pass into hemiplegic epilepsy, and is frequently followed by localised paralysis, neuro-retinitis or choked disc, and localised headache.

4. *Girma on Hallucinations in General Paralysis.*—The existence of hallucinations in general paralysis is still one of the most disputed questions in mental pathology. Some authors—a *résumé* of whose opinions has been given by Dr. Fournier in his article on Alcoholism in the *Dict. de Méd. et de Chir. Prat.*—think that hallucinations are never positively present in general paralysis. Others, such as M. Achille Foville, are certain that, on the contrary, they are almost constantly observed. Between these extreme opinions are those who hold that, though hallucination in general paralysis is not a frequent and important symptom, it does, nevertheless, exist in certain cases. M. Girma (*Thèse de Paris*, 1881, and *Gaz. Méd. de Paris*) has in view the opinion of M. Foville. The following are the author's conclusions. 'Hallucinations are very frequent in general paralysis. They may be observed in all stages of the disease, but particularly in the period of dementia. In the first period they may have a psychical character, with attacks of epileptic or apoplectic cerebral congestion, which seem to have a marked influence on their production; they are rather psycho-sensorial. In a general way, all the senses are capable of being affected simultaneously or successively. Fleeting and variable in their forms, the hallucinations may be often persistent and identical in depressive forms during incomplete remissions of dementia. They sometimes are the cause of impulsive acts; but it is rare that they, like simple hallucinations, are the starting-point of systematic delirium. In a number of cases, they have been only the revival of old normal sensations. Finally, in general paralytics affected previously with alcoholism, hallucinations due to this influence must not be confounded with those which are produced under the influence of general paralysis.' Thereporter in the *Gazette Médicale* says: 'The thesis of M. Girma is an excellent clinical study, commencing by some general considerations on hallucinations and historical *résumé* of the question of hallucinations in general paralysis. It is supported by numerous personal observations, which are well chosen and generally very interesting. We only wish that the author, instead of confining himself to the reproduction of facts such as he has observed them, had entered further into the subject by analysing these facts, commenting on them and comparing them with other similar or contrary facts. This work of analysis and scientific discussion on a question so much disputed, would have given more weight to an opinion so accurately stated.'

5. *Sinkler on Chorea in the Aged.*—Dr. Wharton Sinkler (*Journ. of Nerv. and Ment. Dis.*, July 1881) believes this disease is not so rare in the old as is commonly supposed. It is often mistaken for senile trembling or paralysis agitans. He relates two striking examples in a male and female, aged 86 and 82 respectively. One recovered in a few months, the other remained the same after two and a half years. There was no dementia in either case. Organic heart-disease was present in both. The disease resembles that of childhood, but the movements are less violent and varied. Senile trembling is generally confined to the head, and is a continuous tremor; in paralysis agitans, the tremor is slight at first and under control, generally increasing in extent and violence, with loss of power in the parts. The

tremor of sclerosis occurs during voluntary effort, and is connected with loss of muscular power.

6. *Charcot on Paralysis Agitans and Senile Trembling: Static Electricity in Hysteria.*—A *résumé* of lectures by Professor Charcot, delivered at the Salpêtrière, on the above subjects, is published in the *Four. de Méd. et de Chir. Pratiques*, Oct. 1881. He dwells particularly upon the characteristic symptoms of paralysis agitans other than the tremors, which latter may often be completely absent. He alludes to the peculiar attitude of the patient, whose body is bent forward, while his neck is rigid and his head almost immovable. This rigidity is due to a constant muscular contracture, which affects the flexors first, and always to a more marked degree than the extensors. The facial expression, described as that of surprise, is referred to a contracture of the occipito-frontalis and of the orbicularis palpebrarum. The contracture of the ocular muscles imparts a staring look to the eyes. A similar interference with the function of the laryngeal muscles produces an impairment of speech, which may be interrupted or stammering. The muscular rigidity sometimes causes deformities resembling those of chronic rheumatism, but distinguished by the absence of arthritic swelling, rigidity, and crepitation. The patients experience an indescribable *malaise*, which impels them to incessantly change their position. This abnormal sensation is most marked at night. Although the temperature of the patients remains normal, they suffer from a subjective feeling of intense heat, which is particularly felt on the back and in the epigastrium. M. Charcot emphasises the fact that true senile trembling is a rare affection. He asserts that most of the cases of tremor designated by this name were really developed at an earlier age. Senile trembling often localises itself in isolated muscular groups, causing inco-ordination in the movements of the head and of the extremities. No treatment is efficacious in these diseases. The same observer has attained remarkable results in the treatment of hysteria by means of static electricity. His apparatus is essentially such a static machine as is used in physical laboratories, although somewhat modified. The patients are placed upon isolated stools, connected with the conductor, and thus subjected to the uninterrupted action of electric currents, which, escaping from prominent points of their bodies, produce prickling and tingling. The appetite is increased, and the cutaneous functions stimulated. Special dischargers are provided for the excitation of individual organs, particularly those of special sense. Hysterical contractions, hemianæsthesia, and achromatopsia were completely relieved by the electric bath. Anæsthesia is often permanently, but sometimes only temporarily removed. On the whole, M. Charcot believes static electricity to be more efficacious than the other forms of electricity in restoring the sensibility of anæsthetic parts, and in diminishing the tendency to attacks of hysterical anæsthesia.

7. *Cavafy on Nerve-Stretching in Locomotor Ataxy.*—Dr. John Cavafy, in the *Brit. Med. Jour.*, Dec. 1881, pp. 928, 973, gives details of eighteen cases in which this operation has been carried out with greater or less satisfactory results. The mode in which the operation acts is still *sub judice*; but, so far as we at present know, forcible extension of a nerve is only followed by temporary paralysis, and the operation seems to act on the spinal cord, as well as upon the nerve itself.

8. *Müller and Ebner on Nerve-Stretching in Peripheral and Central Lesions, especially in Tabes Dorsalis.*—These writers give a full account (*Wiener Klinik*, vii Jahrgang, Heft 7) of the literature of this subject, and then record two new cases in which the favourable results, following immediately on the operation, justify them, as they consider, in recommending this operation in the strongest possible way. The interval that had elapsed since the operation was short, but the results seem at least to show that the central pathological changes need not necessarily be the only or even the direct causes of the functional disturbances. J. ANDERSON, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. MAJOR.—Phonation on Inspiration a Cause of Hysterical Aphonia. (*Archives of Laryng.*, Jan. 1882.)
2. ROE.—Laryngeal Whistling. (*Ibid.*)
3. MORGAN.—Diphthonia or Double Voice. (*Ibid.*)
4. SEJOURS.—A Case of Abductor Paralysis due to Lead-Poisoning. (*Ibid.*)
5. GLASGOW.—On a Paralysis of the Crico-Arytænoideus Pisticus Muscle. (*Ibid.*)
6. KIESBACHER.—A Case of Spasm of the Glottis. (*Memorab.*, 1881, No. 3; *Deutsche Medicin. Zeit.*, No. 27.)
7. ROSSBACH.—Electrisation of the Laryngeal Muscles and Nerves through the Skin. (*Monats. für Ohrenh.*, Oct. 1881.)
8. COHEN.—A Case of Prolapse of the Laryngeal Sac. (*Archives of Laryng.*, Jan. 1882.)
9. ELSBERG.—A Case of Eversion and Prolapse of both Laryngeal Sacs. (*Ibid.*)
10. COUPARD.—Fibro-Sarcoma implanted on the Right Posterior Crico-Arytenoid Region; Extraction with the Galvano-Cautery. (*Revue Mensuelle de Laryng.*, Feb. 1882.)
11. SCHAEFFER.—Operations on Polypi of the Larynx by means of a Sponge (Voltolini's method). (*Monats. für Ohrenh.*, No. 3, 1881.)
12. LANGMAID.—Tracheal Tumour resulting from Tracheotomy. (*Archives of Laryng.*, Jan. 1882.)
13. WUNDELSCHMIDT.—Temporary Ankylosis of the two Crico-Arytenoid Articulations in Acute Syneovial Polyarthrit. (*Monats. für Ohrenh.*, No. 10, 1881.)
14. WHIPHAM.—Foreign Body in the Larynx. (*The Specialist*, Dec. 1, 1881.)
15. GREITSMANN.—A Case of Membranous Syphilitic Stenosis of the Trachea. (*Archives of Laryng.*, Jan. 1, 1882.)
16. ALBERTIS.—The Difference between Diphtheritic and Inflammatory False Membranes. (*Bollet. delle Scienze Mediche*, July 1881; *Gaz. Méd. de Paris*, Nov. 5, 1881.)
17. HEMMING.—Cases demonstrating the value of the Laryngoscope as a means of Diagnosis and Treatment. (*The Specialist*, Dec. 1, 1881.)
18. PRINCE.—Is Acute Follicular Tonsillitis a Constitutional Disease? (*Boston Med. and Surg. Jour.*, Feb. 2, 1882.)
19. LEFFERTS.—The Question of Hæmorrhage after Tonsillotomy. (*Archives of Laryng.*, Jan. 1882.)
20. WEIL.—Retropharyngeal Abscess. (*Monats. für Ohrenh.*, 1881, 3.)
21. KUDLICH.—Large Naso-pharyngeal Polypus in a Child four years old. (*New York Med. Rec.*, Nov. 12, 1881.)
22. GOTTSSTEIN.—Idiosyncratic Asthma. (*Bresl. Aerztl. Zeitsch.*, No. 15, 1881.)
23. ROTH.—Epistaxis Endangering Life. (*Memorab.*, Heft 5, 1881.)
24. GLASGOW.—Operation for the Rectification of a

Deflection of the Nasal Septum. (*Archives of Laryng.*, Jan. 1882.)

25. LEFFERTS.—Cases of Rare Congenital Deformity of the Posterior Nares and Throat. (*Phil. Med. News*, Jan. 7, 1882.)

26. BRANDUS.—Complete Occlusion of the Left Side of the Nose. (*New York Med. Rec.*, Nov. 12, 1881.)

27. LITTLE.—Hypertrophy of the Right Side of the Nose. (*New York Med. Rec.*, Nov. 26, 1881.)

28. SEILER.—The Effect of the Nasal Cavity upon the Voice and Articulate Speech. (*Archives of Laryng.*, Jan. 1882.)

1. *Major on Phonation on Inspiration a cause of Hysterical Aphonia.*—Dr. Major thinks that many cases of hysterical aphonia may be attributed to faulty respiration. He quotes the case of a lady (*Arch. of Laryng.*, Jan. 1882) in whom aphonia had come on six weeks after a severe cold. Hysterical symptoms were prominent. Electricity was applied without benefit for several months. With the laryngoscope, there was nothing abnormal to be seen except a spasmodic contraction of the larynx when attempts were made to phonate. Dr. Major suspected her of involuntarily holding her breath when directed to phonate, and, without letting her know his object, proceeded, by daily training, to teach her how to breathe and phonate on expiration. After some weeks of such exercise, the spasm had very markedly lessened, the vocal bands became more and more under control, and simple sounds, then words and sentences, were gradually acquired. Dr. Major questions if many cases of ordinary stuttering may not be due to the same cause.

2. *Roe on Laryngeal Whistling.*—The author records a case (*Arch. of Laryng.*, Jan. 1, 1882) of a young lady who could whistle with the lower part of the throat at will, without the aid of her lips or any portion of the mouth. The laryngoscope showed that the fundamental tones were produced by the vibrations of the edges of the vocal cords, and the modulations of the tones by the minute adjustment of the ventricular bands which regulated the laryngeal opening above the cords. The ventricular bands also, by pressing firmly down on the vocal cords, closed the ventricles, and acted as a damper in preventing the cords from vibrating except for about the middle third of their length. This sphincter-like action corresponds with the position which Mr. Gordon Holmes believes the larynx to assume in the production of the falsetto notes. As the patient, previously to the coming on of the mild laryngitis for which she was under treatment, had possessed some ventriloquial powers, Dr. Roe, to ascertain if the whistling were due to the same cause, examined the larynx of a professional ventriloquist. He found that in this person it assumed exactly the same shape; and, although he was unable to produce a laryngeal whistle himself, he told Dr. Roe of two other ventriloquists who could whistle very loudly with the larynx alone. Dr. Roe infers that the ventriloquial power is due to the ability of modulating the tones of the larynx with little or no assistance of the organs above, except to deflect or 'throw' the voice.

3. *Morgan on Diphthonia or Double Voice.*—In his paper (*Arch. of Laryng.*, Jan. 1, 1882) on diphthonia or double voice, which he defines as the simultaneous production of two tones differing in pitch during phonation, Dr. Morgan does not attempt to add any new theories to those already familiar to laryngologists, but deals rather with

the practical bearing of the subject by collecting the experiences and observations of others. He also adds a case which has recently fallen under his own observation. A boy, aged 19, suffered from chronic laryngeal catarrh. When he sounded 'a', it was seen with the laryngoscope that the cords did not touch each other in all their length, but only for two millimètres at their middle part. At the same moment Dr. Morgan could hear a distinct diphthonia, consisting of an ordinary 'a' sound, followed by a well-marked falsetto, which imparted to the voice an agreeable and musical tone. There were, in fact, two glottic orifices, an anterior enclosed by the bands, and a posterior extending from near the vocal processes backward. The sound in the 'cord-glottis' would be high, that in the 'cartilage-glottis' low, from the fact that the vibration of the cartilaginous portion is less rapid than the vibration of the ligamentous portion. The symptom of diphthonia entirely disappeared after a few months treatment, directed to the removal of the catarrh and the consequent paresia.

4. *Sejous on a Case of Abductor Paralysis due to Lead-Poisoning.*—The patient, a painter (*Arch. of Laryng.*, Jan. 1, 1882), suffered from difficulty of breathing, sensation of constriction in the throat, hoarseness, and inability to produce the lower tones. There was congestion of the pharyngo-laryngeal cavity. On inspiration, the vocal cords were separated by a slit only a line and a half in width, and were approximated when a sound was emitted, vibrating to all appearances normally. The patient had had lead-colic twice, and had been using white paint five weeks before. Sulphate of magnesia and iodide of potassium, followed by tincture of nux vomica, were administered, and cure resulted in nine weeks.

5. *Glasgow on a Paralysis of the Crico-Arytænoideus Posticus Muscle.*—The author believes that the symptoms in the above case (*Archives of Laryng.*, Jan. 1882) prove that the cause of the paralysis was of central origin. The patient, who was a medical man, ascribed his first impairment of health to exposure during long rides, combined with great mental distress. He first noticed hoarseness and difficulty in breathing in 1872, after an attack of malarial fever, followed by great prostration. In 1874, after exposure to wet and cold, he suffered with sore-throat, great difficulty in swallowing, breathing, and speaking. These symptoms increased alarmingly, and were accompanied with somnolence, failing memory, and nervous and jerky movements of the limbs. In 1876, some improvement was noticed. It was at this time that Dr. Glasgow diagnosed a paralysis of the crico-arytænoidei postici muscles, the vocal cords remaining immovable in the middle line. The epiglottis was insensitive to touch, and its movements were sluggish on phonation. There was also some paralysis of the soft palate and, to a very slight extent, of the side of the face. The improvement gradually continued, until in 1881 the right cord moved in a perfectly normal manner, although the left cord was still motionless. At the time of the report the patient described himself as comparatively well. During the whole time from 1872, he had taken no medicines which could favourably influence the disease, excepting iodide of potassium, which had given him no relief.

6. *Kiesbacher on a Case of Spasms of the Glottis.*—Dr. Kiesbacher (*Memorabilien*, 1881, No. 3; *Deutsche Medicin. Zeit.*, No. 27) relates the following case. A girl had suffered from spasm of the glottis for five years, which could only be allayed by in-

jections of morphia. The spasms first came on after typhus fever, and occurred at first at intervals of from three to eight months. They afterwards became so frequent that morphia was injected thrice daily. It was estimated that the quantity injected amounted to 180 grammes a year, or 900 grammes during the five years. Death was ultimately caused by the morphia. No reason could be assigned for the spasms.

7. *Rossbach on Electrification of the Laryngeal Muscles and Nerves through the Skin.*—Dr. Rossbach argues from his personal experience (*Monatsch. für Ohrenh.*, October 1881) that faradisation and galvanism of the larynx may be effected through the skin; and even with weak currents, he says, a physiological and therapeutical effect upon the muscles and nerves of the larynx may be reproduced. It follows in consequence that direct intralaryngeal electrification is not necessary, and may be completely replaced by a sufficiently prolonged cutaneous electrification.

8. *Cohen on a Case of Prolapse of the Laryngeal Sac.*—In a patient (*Archives of Laryng.*, Jan. 1, 1882) suffering from aphonia, which had come on after a severe spell of coughing, Dr. Cohen detected a prolapse of the laryngeal sac overhanging the right vocal cord and occluding the glottis. The absence of a line of demarcation between the ventricular band and ventricle suggested the nature of the lesion. He recommended the patient, who was a physician, to accustom himself to auto-laryngeal manipulation, and to touch the parts with sulphate of copper or some other astringent powder. Ten months later there was partial replacement of nearly the anterior half of the prolapsed wall, and the voice had returned, though hoarse. A year afterwards the voice had much improved, though the appearance of the parts had not altered.

9. *Elsberg on a Case of Eversion and Prolapse of both Laryngeal Sacs.*—The patient (*Archives of Laryng.*, vol. i, 1882), whose voice had been affected from infancy, had had four separate attacks of aphonia, lasting from one to two months, which came on without assignable cause, and passed away without special treatment. He had suffered with prolapsed rectum and hæmorrhoids for over twenty years. Two tumours, apparently issuing from the ventricles, were discovered upon the vocal bands. They were larger during respiration than during attempted phonation, and seemed to be moved with the current of air. They were pear-shaped, the small end in front; in consistence they were soft, and could be indented with a probe. They could be made to disappear in great part during respiration, by being pushed with a properly bent probe into the sacculi laryngis; and, unless made to reappear sooner by coughing, they would stay away for a time, varying from a few minutes to an hour. But the most remarkable change took place in the tumours when the larynx passed from the respiratory to the phonatory condition; for a moment they pressed against each other, then they became narrower. The diminution in breadth was not merely a compression of the two tumours against each other, but an actual sliding inside of the sacculi, so that more of the vocal bands became visible, and the tumours no longer touched each other at all. All portions of the mucous membrane were relaxed. Dr. Elsberg removed the anterior portion of the tumour on the left side (that being the larger) with cutting forceps which he had devised for the purpose. There was hardly any hæmorrhage, but a good deal of pain. A weak solution of iodide of zinc was applied.

A week later, the whole remaining tumour on the left side was removed at one sitting. The sacculus of the right side was replaced as far as possible each time Dr. Elsberg saw the patient, and persulphate of iron, iodide of zinc, or iodine, were applied to the whole of the interior of the larynx at frequent intervals. At an examination made nine weeks afterwards, there was no trace of the tumour on the left side, and only a comparatively small elevation or swelling on the right. For some years messages were received from the patient to the effect that his voice had never again failed him.

10. *Coupard on Fibro-sarcoma implanted on the right Posterior Crico-arytenoid Region: Extraction with the Galvano-Cautery.*—The patient (*Revue Mensuelle de Laryng.*, Feb. 1, 1882) had suffered for ten months from what was thought to be catarrhal pharyngitis. The last month he had become much worse, being able neither to breathe nor to swallow. On laryngoscopic examination, a huge tumour was found obstructing all the laryngeal infundibulum; it appeared to be inserted upon the superior part of the arytenoid cartilages. The voice was scarcely altered. Tracheotomy was performed. Dr. Fauvel was unable to extract the tumour with the forceps, as the blades slipped off, so that it could not be grasped. The galvano-cautery was then applied, but the wire was not thick enough and melted; a stronger wire was afterwards used, and the tumour cut through. It measured 5 centimètres in diameter and 4 in thickness, and was flattened at its edges. It consisted of fibrous tissue containing a few embryonic cells. As it appeared that the tumour had not been entirely removed, the wire was again passed round and pulled as tight as possible. As this means failed to bring more away, Dr. Fauvel turned the thread upon itself, took it out of the apparatus, and left it in its place. The next day, the remains of the tumour were extracted without any difficulty. When seen a year afterwards, the patient was in perfect health, without any trouble in eating or breathing.

11. *Schaeffer on Operations on Polypi of the Larynx by means of a Sponge (Vollolini's method).*—The author draws the following conclusions (*Monatsch. für Ohrenh.*, No. 3, 1881) with regard to this method.

1. The operation with the sponge is especially indicated in cases of hard and pedunculated fibroma.
2. In cases of soft papilloma and dermoid cysts, the result is not as satisfactory.
3. The proceeding may be employed, combined with the usual means of removing growths, in those tumours which have a broad base, in order to make them accessible to other instruments.

12. *Langmaid on Tracheal Tumour resulting from Tracheotomy.*—In this case (*Archives of Laryng.*, Jan. 1, 1882) tracheotomy was performed upon a child four years old for the removal of half a dried chestnut which had been drawn into the trachea. It was extracted with the forceps. The tube, which was left in to allow other fragments to escape, was removed the third day. After convalescence the voice remained a hoarse whisper, and respiration was impeded on exertion. A greyish-white tumour, probably a granulation mass, was detected with the laryngoscope, occupying one-third of the diameter of the trachea in the region of the cricoid cartilage. The tumour became steadily smaller, and at the end of four months only a sessile button remained. This was still present when the child was examined a year later.

13. *Wundelschmidt on Temporary Ankylosis of the two Crico-arytenoid Articulations in Acute Synovial*

Polyarthritis.—The author (*Monatsch. für Ohrenh.*, No. 10, 1881) relates a case of immobility of the two crico-arytenoid articulations, which came on in the course of an acute attack of articular rheumatism and lasted three days.

14. *Whipham on a Foreign Body in the Larynx.*—A piece of bone of a rabbit (*The Specialist*, Dec. 1, 1881) escaped into the larynx of a man who was laughing while eating. It became so firmly lodged, that though seized with the forceps, it could not be removed. Tracheotomy was performed, and fruitless efforts made to extract it through the wound. The incision was therefore prolonged over the thyroid cartilage; and by this means the bone was taken away. It resembled in shape and size the horizontal plate, with a part of the vertical plate, of the human palate bone.

15. *Gleitsmann on a Case of Membranous Syphilitic Stenosis of the Trachea.*—The patient, aged 32, with history of syphilis (*Archives of Laryng.*, Jan. 1, 1882), suffered from complete aphonia and marked dyspnoea. The most striking feature of the laryngoscopic image was the seeming appearance of a second glottis far below the normal one. Two dark symmetrical membranes ran horizontally from back to front of the trachea, with a very small opening between them. They remained immovable during respiration and phonation. They were located in the region of the fifth and sixth tracheal cartilages. Their surface and free margin did not show any sign of ulceration. The motion of the vocal cords proper was uniform; but the glottis remained open about as wide as the false membranes below were apart from each other. Tracheotomy was not performed. After treatment with iodide of potassium and mercurial inunctions, signs of improvement were soon noticed. A month afterwards the voice had returned, the false ligaments had almost disappeared, and the difficulty in breathing was scarcely perceptible.

16. *Albertis on the Difference between Diphtheritic and Inflammatory False Membranes.*—Dr. Albertis (*Bollet. delle Scienze Mediche*, July 1881; *Gaz. Méd. de Paris*, Nov. 5, 1881), by treating non-diphtheritic false membranes with sulphuric acid, has obtained crystals which are insoluble in ether and absolute alcohol, but soluble in alkalis, and which he considers to be crystals of tyrosine. He has not obtained these crystals when subjecting diphtheritic membranes to the same treatment. He draws the following conclusions. Diphtheritic false membranes have a different chemical composition from that of inflammatory false membranes. Diphtheritic membranes do not contain aromatic constituents like tyrosine. The action exerted by sulphuric acid and microscopical examination suffice, therefore, he maintains, to establish the nature of a false membrane.

18. *Prince on the Question, Is Acute Follicular Tonsillitis a Constitutional Disease?*—To give an answer to this question, Dr. Prince contributes four cases (*Boston Med. and Surg. Jour.*, Feb. 2, 1882) as types of a large number he has met with during the past year. His conclusions are as follows. There is no constant relation between the local inflammation and the constitutional symptoms; between the local inflammation and the height of the fever; or between the height of the fever and the remaining constitutional symptoms. The fever is often so high (sometimes reaching 105 deg. Fahr.) as to be far out of proportion to the local inflammation, which may be slight. With slight fever and

slight local inflammation, there may be severe constitutional disturbances, such as headache, loss of appetite, general prostration, prolonged convalescence, etc. The disease occurs in an epidemic form, when it is undoubtedly constitutional. There are strong though not conclusive reasons for believing it to be more or less infectious. The frequency with which it occurs in hospitals is such as to be best explained on the theory of a septic action on the system. It is probably often mistaken for diphtheria, from which it differs greatly in its symptoms and course. Dr. Prince adds, that he does not maintain that every case of tonsillitis, in which the follicles are involved, is in reality a constitutional fever; but that there is a form of sore throat of common occurrence, in which the follicles and mucous membrane of the tonsils are chiefly involved, which is the localised expression of an essential fever not generally recognised.

19. *Lefferts on the Question of Hæmorrhage after Tonsillotomy.*—This question, says Dr. Lefferts (*Arch. of Laryng.*, Jan. 1, 1882), is one which is regarded from two extreme points of view. Many general practitioners dread the operation as one likely to be followed by profuse if not dangerous hæmorrhage; while the works on diseases of the throat deprecate the idea that the operation is attended by any remarkable loss of blood. The author summarises his clinical experience, based on 500 tonsillotomies, as follows: '1, a fatal hæmorrhage is very rare; 2, a dangerous hæmorrhage may occasionally occur; 3, a serious one, serious as regards both possible and immediate and remote results, is not very unusual; and, 4, a moderate one, requiring direct pressure and strong astringents to check it, is commonly met with.' In the majority of cases, no trouble is experienced.

20. *Weil on Retropharyngeal Abscess.*—Dr. Weil (*Monatsc. für Ohrenh.*, 1881, 3) relates a case of retropharyngeal abscess which was incised three times to allay the severe dyspnoea which was caused by it. The third incision was made sufficiently large to completely evacuate the contents, but, in spite of this, œdema of the glottis ensued, and resulted in the death of the patient. The abscess, which was situated somewhat to the left of the middle line, was considered by Dr. Weil to have been of a glandular origin, secondary to suppuration in the cavity of the tympanum.

21. *Kudlich on a Large Naso-pharyngeal Polypus in a Child four years old.*—In this case (*New York Med. Record*, Nov. 12, 1881), a large fibrous polypus grew from the lateral wall of the pharynx, and extended into the posterior nares, occasioning a purulent coryza, constitutional troubles, and dyspnoea. The tumour, which had at first been taken for a hypertrophied tonsil, was removed, and the child recovered.

22. *Gottstein on Idiosyncratic (Idiosyncraticum) Asthma.*—Dr. Gottstein contributes a case (*Bresl. Aerztl. Zeitschrift*, No. 15, 1881) of ipecacuanha asthma, which bears out the view of Fraenkel that asthmatic attacks caused by the presence of polypi, as well as those produced by the inspiration of dustlike materials, are to be explained as a reflex irritation of the sensory nerves of the nasal mucous membrane. The patient, a druggist, aged 24, had suffered for years with a chronic cold, complicated for the last two years and a half with asthmatic attacks, which came on regularly after powdering ipecacuanha. Even in preparing the small quantity of ipecacuanha requisite for a Dover's powder,

the attacks were provoked. They began with a violent fit of sneezing and difficulty in getting the breath. Respiration became more and more difficult, and was accompanied by an audible whistle. The fit lasted half-an-hour, and was followed by a profuse secretion from the mucous membrane for twenty-four hours. Sometimes the fit would recur in the night. The nasal cavities appeared red, and covered with abundant mucus, which dried at the posterior nares into a scab. There was no fœtor. Although it was here evident that the ipecacuanha first affected the diseased mucous membrane, and only secondarily produced the asthma, it was not so evident what part the mucous membrane took in producing it, and whether the deeper organs of respiration did not exert an equal influence. Dr. Fraenkel proposed to determine the point by plugging the posterior and anterior nares. In this case, only the anterior nares could be plugged, as the patient lived at a distance. With this precaution, on dispensing the Dover's powders, he remained unaffected; but, in rubbing up ipecacuanha powder, the asthma came on, though without sneezing, and in a very mild form. Had the asthma been in any way due to the irritation of the deeper respiratory passages, it would have been worse when the anterior nares were plugged, because, in normal respiration, a part of the powder would be retained in the nose. That the attacks occurred, though mildly, when the ipecacuanha was powdered, can be explained on the supposition that the particles of ipecacuanha, when breathed in, were driven during expiration though the posterior nares on the nasal mucous membrane.

23. *Roth on Epistaxis Endangering Life.*—Dr. Theodore Roth recommends (*Memorabil.*, Heft 5, 1881) in cases of excessive and prolonged epistaxis, acetate of lead mixed with opium, which he gives every two hours in the form of a powder; subacetate of lead, 12 centigrammes (1.55 grains); pure opium, 1 centigramme. The author states, that one of his patients took in three days 3 grammes of acetate of lead and 40 centigrammes of opium, before obtaining complete relief from the epistaxis.

24. *Glasgow on an Operation for the Rectification of a Deflection of the Nasal Septum.*—The author (*Arch. of Laryng.*, Jan. 1, 1882) draws attention to an operation first proposed by Dr. Steele of St. Louis for the rectification of a deflected septum. It consists in making a stellated division through the mucous membrane and cartilage, which destroys in great measure the resiliency of the sternum. The divided septum is then pushed back to the natural line, and retained in position by plugs. The instrument necessary is a stout forceps, shod on one blade with knives set in a stellar form. The cutting blade is covered by a thin sliding shield, to protect the nostril from laceration during insertion. The plugs by which the straightened septum is supported should be sufficiently long to reach from the inferior meatus to the tip of the nose. An important feature of the plug lies in the pointed shoulder, which is inserted in the sulcus at the tip of the nose.

25. *Lefferts on Cases of Rare Congenital Deformity of the Posterior Nares and Throat.*—Dr. Lefferts discovered, during the rhinoscopic examination of a man, aged 25 (*Phil. Med. News*, Jan. 7, 1882), that the posterior edge of the septum, from its point of emergence into the parts making up the vault of the pharynx, to a point half way in its course from the floor of the nares, was divided vertically into two distinct halves, enclosing between them a space

large enough to contain, perhaps, the end of a lead-pencil. This space was more or less triangular in shape, its base lying above, and was lined apparently with normal mucous membrane. Its depth was not ascertained, but an anterior examination of the nasal passages disclosed nothing abnormal as to the configuration of the septum. There was no history of injury to the nose or to the skull. No symptoms were referable to the condition, and its presence was of course unknown to the patient. In a second case, a girl, aged 19, two symmetrical ovoid perforations, of the size of a small pea, were present; one on each side of, and just above, the point where the anterior pillar of the fauces loses itself in the broad expanse of the soft palate. Their edges were swollen and rounded, and free from all cicatricial tissue. The condition was evidently congenital. The patient never had an ulcerated sore throat, and remembered that the openings had always existed. They gave rise to no inconvenience, and demanded no surgical interference.

26. *Brandus on Complete Occlusion of the Left Side of the Nose.*—This case is reported in the *New York Med. Record*, Nov. 12, 1881. The patient, a young girl, complained of obstruction in the right nostril. After having removed several polypi, Dr. Brandus found a layer of bone situated one inch and three-quarters above the nostril, which obstructed all the orifice. It was perforated with the galvano-cautery, and nasal respiration re-established.

27. *Little on Hypertrophy of the Right Side of the Nose.*—Dr. Little showed, at the New York Surgical Society (*New York Med. Record*, Nov. 26, 1881), a woman, aged 25, who, for five or six years, had noticed that the right side of the nose was larger than the left. From that time it gradually increased in size, and the last year had made rapid progress. There was no pain. To the touch it felt like a *nævus*.

28. *Seiler on the Effect of the Nasal Cavity upon the Voice and Articulate Speech.*—After describing the process of vocalisation in general, Dr. Seiler (*Arch. of Laryng.*, vol. iii, No. 1) considers the results which are produced upon articulate speech by an alteration of the parts concerned in articulation. When paralysis or perforation of the soft palate exists, speech will have a nasal sound, caused by too strong a resonance in the nasal cavity; for the air, set in vibration by the vocal cords, enters it directly, and probably produces a stationary wave, which, as a self-sounding body, interferes with the resonance of the oral cavity, and, in a measure, destroys the character of the vowels. There is, moreover, not sufficient air passing through the mouth, since most of it escapes through the nose, to produce the consonants with sufficient loudness and distinctness. For this reason, articulate speech becomes almost impossible in cases of fissure of the hard palate. On the other hand, if stenosis of the posterior opening of the nasal cavity exist, very little alteration in the speech is noticed, except in the pronunciation of *m* and *n*. If there be stenosis of the anterior nares, the effect is entirely different. The vibrations of the air within the cavity cannot come out; and, although they are carried through the bones of the skull to the ear of the speaker with great force, the sound reaches the listener without being qualified and intensified by nasal resonance. As in posterior stenosis, *m* and *n* are changed in pronunciation into *b* and *d*.

W. J. WALSHAM.

OPHTHALMOLOGY.

RECENT PAPERS.

1. ABADIE. — Plastic Operations on the Eyelids. (*L'Union Méd.*)
2. SCHMIDT-RIMPLER. — The Specific Reaction of the Optic Nerve to Mechanical Irritation. (*Centralbl. für die Med. Wiss.*, Jan. 1882.)
3. SCHÖN. — The Venous Pulse of the Retina. (*Klin. Monats. für Augenheilk.*, Sept. 1881.)
4. MICHEL. — The Condition of the Eye in Disturbance of the Carotid System. (*Klin. Monats. für Augenheilk.*, Oct. 1881.)
5. KIPP. — Eye-Affections from Malarial Poisoning. (*Trans. of Med. Soc. of New Jersey.*)
6. DUFOUR. — Transplantation of Conjunctival Mucous Membrane. (*Revue Méd. de la Suisse Romande.*)
7. BAUDRY. — Emphysema of the Eyelids. (*Revue de Thérap.*, No. 1, 1882.)
8. RHEINDORF. — Laceration of the Vitreous Body in Extraction of Cataract.
9. TESTUT. — The Mode of Cicatrisation of the Tendon after the Operation for Strabismus. (*Rec. d'Ophthal.*)
10. CARRERAS-ARAGO. — The Action of Homatropine (*El Siglo Médico*, Jan. 22, 1882.)
11. DAGUENET. — Traumatic Retinitis. (*Recueil d'Ophthalmol.*, Dec. 1881.)
12. GALEZOWSKI. — Traumatic Cataract. (*Ibid.*, Dec. 1881.)
13. GALEZOWSKI. — Persistence of the Hyaloid Vessels. (*Ibid.*, March 1882.)

1. *Abadie on Plastic Operations on the Eyelids.*—In an important note on two cases of ectropion, treated by direct transplantation (*L'Union Méd.*), Dr. Abadie begins by drawing attention to the older methods for reparation of ectropion, namely, those where a flap is taken from the vicinity and those from a more distant region. Although the surgical object of protection was oftentimes attained in these cases, the results were frequently indifferent. In the former instance, either a shapeless lump arose at the pedicular attachment of the flap, or a new cicatrix with its concomitant contractions originated; or, again, the operation was unsuitable from too large an area being occupied by cicatricial tissue. The second, or Indian method, that of taking skin from the arm, is condemned on account of difficulty of execution and of fatigue to the patient. While, in the older method, the flap remained connected by a pedicle with the part from which it was taken, more recent surgery has dispensed with this attachment, and now transplants the flap directly. Although this is known as Wolfe's method, Lefort was the first to transplant large flaps directly, and to point out that it is indispensable to get rid of the cellular tissue and of its fat. This transplantation of large flaps of skin, Dr. Abadie conceives to be superior to epidermic grafts or to dermic transplantation *en mosaïque*; for, though the latter may produce less retractile cicatrices, they are incompetent to fill up a loss of substance. In Dr. Abadie's first case of ectropion, a large flap of skin was taken directly from the posterior surface of the forearm. There was only partial success, for, though the ectropion was diminished, about a third of the flap sloughed. Rapid cooling at the time of operation the surgeon conceived to be the cause of mortification, and, in the succeeding case, measures were adopted to prevent its recurrence. Here the lashes touched the brow, the inflamed conjunctival mucous membrane bled at the merest touch, and an eye-protector had

to be worn continually. As all the neighbouring tissue was cicatricial, a flap of skin, deprived of fat and of connective tissue, and measuring six centimètres by four centimètres, was taken from the arm. It happened to fit exactly, and was kept in position by six fine silk sutures. During the operation, the flap was kept warm by a sponge steeped in a saturated solution of boracic acid at a temperature of 118 deg. Fahr. A thin bandage was then applied, and the temperature maintained by a bladder filled with hot water (118 deg. to 122 deg. Fahr.), renewed every half hour. At the end of forty-eight hours there was no change, and the hot applications were renewed less frequently. The sutures were removed on the fourth day. About the sixth day, the superficial epidermic layer began to separate. However, with the exception of some slight ulceration of the cicatricial tissue adjoining the lower margin of the flap, all went well; and, at the end of three months, the ectropion was quite cured, although the graft had diminished to $3\frac{1}{2}$ centimètres by 1 centimètre. M. Abadie mentions Mayer's case, operated on in March 1881. Here the flap was triangular, measuring 5 centimètres at the base and 6 centimètres from base to apex. Although no special precautions are reported to have been taken against the chilling of the flap, the operation was perfectly successful. M. Abadie is of opinion, however, that, in all cases where transplantation of an extensive flap is required, measures should be taken to prevent loss of heat.

2. *Schmidt-Rimpler on the Specific Reaction of the Optic Nerve to Mechanical Irritation.*—The author (*Centralbl. für die Med. Wiss.*, Jan. 1882) begins by narrating the case of a very intelligent patient, the stump of whose optic nerve was irritated immediately after extirpation of the globe. On being asked if there were any sensation of light, he promptly answered in the negative. The vision of this eye had been tested immediately before the operation by finger-counting at a distance of four feet. Microscopical examination of the optic nerve showed moderate increase of cells and nuclei of the connective tissue, but there was no atrophy. From Professor Rothmund of Munich, Dr. Schmidt-Rimpler received corroborating testimony, accompanied by strictures on the imperfect observations of the older surgeons. But Schmidt-Rimpler is of opinion that the flashes of light might have been caused by the operative methods then in vogue, and the retina irritated by undue traction on the optic nerve at the moment of section. But though section of the optic nerve may not produce sensation of light, it does not follow that a specific reaction may not respond to mechanical irritation; for example, in the case of a lad suffering from pain and sympathetic amblyopia in the left eye after enucleation of the right ball two years previously, there was acute pain on touching the stump with a probe; but there was no sensation of light. The neurosis ceased on removal of the stump. Schmidt-Rimpler then made experiments on six patients of intelligence, from whom the globe had been removed only a short time before. A pear-shaped electrode was pushed about the vicinity of the stump of the optic nerve. Of the six persons, examined in a perfectly darkened room, two perceived flashes of light when pressure was made on a place corresponding to the position of the optic nerve. Pressure on other parts produced no result. One of these patients remarked the similarity of this sensation of light with that produced by electricity. These experiments are held to be conclusive of the specific reaction of the optic nerve to mechanical

irritation. The other four patients, in whom pressure did not produce any sensation of light, perceived it on the application of the electric current. One electrode being placed in the orbital cavity, the other on the neck, four to eight Bunsen's elements sufficed to call forth indubitable sensations of light. Failure of pressure to produce any effect on the four cases is assigned to partial atrophy or great retraction of the optic nerve.

3. *Schön on the Venous Pulse of the Retina.*—In the case narrated (*Klin. Monats. für Augenheilk.*, Sept. 1881), the heart pulsed 16 to 23 times a minute. Over the left side was audible a systolic murmur, with its maximum intensity in the second intercostal space. The radial pulse was not small. In both eyes a moderate physiological cup existed. On either side the venous pulsation was evident, but was more marked in the veins of the left eye. The course of the pulsation was as follows. A moment after the radial pulse, a sudden dilatation of the veins occurred. The maximum of dilatation was succeeded by a gradual subsidence, and a stationary period, lasting two seconds, ensued, and during this a stream of blood flowed equably through the vessels. Between this stage and the next pulsation, there was neither emptying of the veins nor any sudden pallor, indicative of a respiratory complication. The occurrence was most characteristic in the veins which took a downward course. There was no visible pulsation in the arteries. The author lays down the propositions: that the venous pulse is a phenomenon of obstruction; that the outflow of the ordinary quantity of venous blood is prevented by compression of the veins; that the artery, thickened by the pulse-wave, effects this compression; and that the place where this occurs must be the optic nerve-tract, as far as the lamina cribrosa. With regard to the last proposition, much reliance is placed on the large amount of connective tissue surrounding the central vessels of the optic nerve, the author presuming that this would aid the compression and so increase the amount of pulsation.

4. *Michel on the Condition of the Eye in Disturbance of the Carotid System.*—This communication (*Klin. Monats. für Augenheilk.*, Oct. 1881) is introduced by observations from the author's own experiments. Compression of the carotid artery was found to produce temporary pallor of the papilla, slight arterial injection, followed by venous stasis and absence of the venous pulse. Ligature of the carotid has similar effects, but the anæmia is more enduring: the intra-ocular pressure is diminished, while the pressure in the carotid of the opposite side is increased. The effect of disturbances of the carotid system on the nutrition of the eyeball is illustrated by two cases. Ophthalmoscopic examination of an extremely anæmic girl, suffering from double amblyopia, the field of vision being unaffected, revealed extreme arterial anæmia, large and injected veins, and œdema of the retina. Further examination made manifest aneurysmal dilatation of both carotids. The second case was that of a man aged 49, affected with rapidly occurring diminution of sight. The right field of vision was normal, and ophthalmoscopic examination revealed arterial and venous anæmia of the retina, which was soon followed by venous hyperæmia. Hypertrophy of the right ventricle and thrombosis of the right carotid artery were diagnosed. In a few days, total pulselessness ensued, and to this was added clouding of the papilla and of the retina. This condition was terminated

by atrophy of the disc. The diagnosis was afterwards confirmed, and no embolus could be detected. Chronic disease of this artery is followed by nutritive alterations of definite parts of the eye, and sixty-two observations serve to bring into connection the origin of cataract and atheromatous changes in the carotid walls, viz.: 1. twenty-four cases of unilateral cataract, with unilateral affection of the carotid (or developed unilaterally in a significantly preponderating manner); 2. twenty-one cases of double cataract, with advanced atheroma of one carotid, affected earlier or more diseased than that of the opposite side; 3. nine cases of double cataract, developed bilaterally, and accompanied by advanced atheroma of both carotids; 4. eight cases of cataract associated simultaneously with atheroma of the carotid and enlargement of the thyroid body. Hence senile cataract may be regarded as a consequence of the atheromatous changes in the carotid walls; and hence, also, if cataract be hereditary, it is only so indirectly, and that by transmission of this vascular disease.

5. *Kipp on Eye-Affections from Malarial Poisoning*.—Dr. Kipp (*Trans. of the Med. Soc. of New Jersey*) divides his subject into the maladies which may affect the eye during the paroxysm and those which are consecutive to it. After the admission of no personal knowledge of the former group, reference is made to the symptoms, which are mainly hyperæmia of the conjunctiva, lachrymation, photophobia, blepharospasm, irritation of the iris, iritis, and temporary amaurosis. Usually no marked changes were observed with the ophthalmoscope, but in a few cases œdema of the papilla and hyperæmia of the retina were detected. Of the second class of cases, which are of a much less ephemeral nature, the most frequent lesion is a superficial ulcer of the cornea, usually of one eye only, always accompanied by severe pain in and around the eye, by photophobia, and lachrymation. The first stage of the ulcerative process is an opaque linear swelling, with some injection of the adjacent cornea; the central portion sloughs off; and, though in favourable cases the ulcer spreads no further, yet a progressive destruction of the superficial corneal layers may follow. In either case, the reparative process is extremely slow. Other affections of the eye, which have been noticed to occur in connection with malarial fevers, are diseases of the uveal tract, hæmorrhage into the vitreous body, retinal hæmorrhage, optic neuritis, partial or total loss of vision of one or both eyes, without visible changes in the ocular structures, and, therefore, presumably dependent on disturbances in the nervous centres. The author had read a paper on malarial keratitis before the American Ophthalmological Society in 1880, and in his present article quotes O. Becker to the effect that, though this disease was described by the older writers, it is totally ignored in modern literature. This is certainly not the fact, as can be found on reference to the writings of Macnamara and others; and it is a disease quite well known to the surgeons of India.

R. G. HEBB, M.D.

6. *Dufour on Transplantation of Conjunctival Mucous Membrane*.—In the *Revue Méd. de la Suisse Romande*, M. Marc Dufour reports some cases in which he had transplanted conjunctiva of a rabbit to the human eye. In two cases, the operation was undertaken on account of symblepharon. The adhesions were dissected up, and to the denuded surface some conjunctiva of the rabbit was applied, and fixed in place by means of sutures. In the first

case, that of an old woman, the operation failed because the graft died. In the case of a child aged 11 years, the operation was a complete success, the graft living. In the case of a man, from whose lid M. Dufour removed an epithelioma, a graft was taken from the buccal mucous membrane of the patient. The operation in this case, too, was a complete success. The author advises to wait a short time after the incision is made, before the graft is applied, also that care should be taken in the application of the sutures to prevent the edges of the transplanted piece from rolling under; and, finally, that the freshened surface and the graft should be washed in a solution of salicylic acid.

7. *Baudry on Emphysema of the Eyelids*.—Dr. Baudry of Lille, analysing in the *Gaz. des Hôp.* a case of emphysema of the eyelids and of the orbit, follows up his article with reflections intended to clear up this somewhat obscure question, and ends with the following conclusions. The appellation of spontaneous emphysema of the eyelids and orbit should be reserved for extremely rare cases, like those of MM. Jarjavay and Gosselin, in which, after attempting to blow the nose, the air passes spontaneously from the nasal fossæ to the cellular tissue of the orbits and eyelids. Emphysema of the eyelids and of the orbit, consecutive on the action of blowing the nose or of sneezing, is the result, in the majority of cases, of a fracture of one of the bones of the inner wall of the orbit, allowing the direct passage of the air from the nasal fossæ into the areolar tissue of the eyelids or of the orbit. The emphysema will be limited to the eyelids or to the orbit, or may occupy both regions, according to the situation, the extent of the fracture, and the greater or less pressure of the expired air. In rare cases, the so-called spontaneous emphysema follows complete rupture of one of the walls of the lacrymal duct, consequent on catheterism or other surgical operation, whether the rupture be accompanied or not by bony lesions.

8. *Rheindorf on Laceration of the Vitreous Body in Extraction of Cataract*.—In order to prevent the formation of secondary cataract, after extraction of the lens, the author tears the hyaloid membrane with a cystotome immediately after the removal of the lens, and allows the vitreous humour to come forward into the anterior chamber. In this way, the capsule and any remains of lens-matter are pushed out of the pupillary space, and so no secondary cataract can be formed. Any slight loss of vitreous humour accompanying this procedure is of no moment. Besides the avoidance of secondary cataract, further advantages are claimed for this method of extraction. Pulling of the capsule and suspensory ligament on the ciliary processes, and consequent irritation, are avoided; and the circulation in the uveal tract is improved. The author has found, after the experience of a large number of cases, that by this method he gets better vision and quicker healing.

9. *Testut on the Mode of Cicatrisation of the Tendon after the Operation for Strabismus*.—Dr. Maurice Testut (*Rec. d'Ophth.*) made investigations on dogs (terriers). Either the rectus internus or the rectus externus was divided, the animal kept alive about a month, then killed, and the eye carefully examined, with the following results. 1. The rectus internus is inserted into the sclerotic $4\frac{1}{2}$ millimètres from the edge of the cornea, and after strabotomy retracts 6 or 7 millimètres. 2. The rectus externus is inserted into the sclerotic 5 millimètres from the edge of the cornea, and after strabotomy retracts 5 or 6 millimètres. 3. The cut tendon is inserted

principally into the sclerotic, and secondarily into the overlying conjunctiva; the insertion is by means of fibrous prolongations. The author recommends in division of the internal rectus sparing separation of the connections of the sheath of the muscle with the conjunctiva and sclerotic.

W. CHARNLEY, M.D.

10. *Carreras-Arago on the Action of Homatropine*.—Dr. Carreras-Arago (*El Siglo Med.*, Jan. 22, 1882), from his experiments with homatropine, has deduced that, when used in individuals under 35 years of age, it produces only paresis of the ciliary muscle; and that this action, though similar, is milder and more transient than in the case of atropine. In individuals over 35 years, whose accommodation has fallen to five or six dioptries, a true paralysis is produced.

11. *Daguenet on Traumatic Retinitis*.—Dr. Daguenet records an interesting case (*Recueil d'Ophthal.*, Dec. 1881) of that very rare affection, traumatic retinitis. The patient was a soldier, who struck his eye against a tent-pole. Shortly after the accident, the condition of the organ was as follows: considerable conjunctival injection, dilated pupil, tremulous iris, complete loss of sight, hæmorrhage into the vitreous body, sufficient to prevent an ophthalmoscopic examination. Twenty days later, the condition was changed as follows. The pupil was dilated, the iris tremulous, the lens transparent, the vitreous humour full of floating bodies; the fundus could now be seen, and showed the existence of remarkable changes. The papilla could only be recognised by its rounded form, and by the presence of a large retinal vein. It was completely covered and masked by a white exudation, which extended round it for about the distance of two diameters. The retinal vessels could not be traced into this mass. Two large echymoses were situated on the retina, on the upper border of the patch of exudation. Sight was reduced to qualitative perception of light. A fortnight later, distinct signs of approaching pigmentation, round the edges of the exudation, could be perceived.

12. *Galezowski on Traumatic Cataract*.—Dr. Galezowski, in a recent paper (*Recueil d'Ophthal.*, Dec. 1881), groups all traumatic cataracts in three main divisions, viz.: 1. Simple, that is, without the presence of foreign bodies; 2. Where foreign bodies are present in the lens; 3. Where other parts of the eye have been wounded as well as the lens. He remarks that the first variety is frequently found in children, and this he attributes to the use of steel pens in schools, and to the great number of mechanical toys which are now in fashion. He also mentions, as belonging to this form, an interesting case of traumatic cataract produced by lightning. The patient was a soldier, who, being on duty on the night of April 22, found himself, for an instant, the centre of an electric discharge. He was, he stated, surrounded by flame, received a violent shock, and became giddy. He at once noticed that his eye-sight was impaired slightly. In August following, a semi-opaque cataract was detected in the right eye; retinal sensibility not having been affected. Dr. Galezowski gives further instances of these simple traumatic cataracts having been caused by blows or falls on the head. In children, such cataracts are singularly free from danger. They became absorbed of themselves, and rarely require surgical interference. In considering the second variety of traumatic cataracts, that is, those in which foreign bodies are present, Dr. Galezowski lays

down the doctrine that such bodies cause, as a rule, no disturbance, and may be tolerated in the eye for an indefinite period. The only exception he would make is, when the foreign body is situated close to the surface of the lens, or is in contact with the posterior surface of the iris. When such is the case, iritis or choroiditis may be looked for; and, therefore, in such cases, surgical intervention is necessary. The extraction of the lens should only be undertaken when the foreign body is plainly visible, so that it may be removed as the first stage of the operation. If left behind after the capsule has been opened, parophthalmitis may supervene. He believes that the presence of a foreign body in the lens may always be recognised by the following signs. 1. The opacity of the lens is always capsulo-lenticular. 2. There is on the cornea a small wound or scar, denoting the point of penetration of the foreign body. 3. The actual situation of the foreign body is shown by a black or brownish discolouration in the centre of the white lenticular opacity. As regards the third division, or that of 'compound traumatic cataracts', Dr. Galezowski, in this paper, speaks only in general terms, reserving the bulk of his observations for a future occasion.

13. *Galezowski on the Persistence of the Hyaloid Vessels*.—Dr. Galezowski (*Rec. d'Ophth.*, March 1882) records three cases of the persistence of the hyaloid vessels which have lately come under his notice. The first presented itself in a patient aged 74, who suffered likewise from congenital amblyopia. The remains of the vessel were adherent to the posterior surface of the lens, a diagnostic point to which Dr. Galezowski attaches considerable importance in doubtful cases. In the second case, the presence of the hyaloid vessels was associated with posterior polar cataract. In the third, the canal of Cloquet remained patent, this anomaly being further associated with congenital amblyopia. In young children from 1 to 2 years of age, anomalies similar to the above may be found occasionally in the neighbourhood of the disc, and are due to the persistence of the canal of Cloquet. But with the growth of the globe the canal and vessels become so reduced that, even with a strong lens, their presence is difficult to make out.

LITTON FORBES.

REVIEWS.

Materia Medica and Therapeutics. Inorganic Substances. By CHARLES D. F. PHILLIPS, M.D., Member of the Royal College of Physicians, late Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. London: J. and A. Churchill. 1882.

THE first volume of this work, the 'Vegetable Kingdom', was published in 1874, and soon obtained a high and richly deserved reputation as an authority on the subject of which it treats. In explanation of the delay in the appearance of this, the second volume, it may be stated that in 1877 Dr. Phillips met with a severe railway accident, which for a long time incapacitated him from work of any kind. In fact, the present volume comes to us from a bed of pain and sickness; and this fact is urged in mitigation of any shortcomings which it may present. But, in truth, no apology is needed, for the subject has been carefully handled, and the 'Inorganic Kingdom' is a worthy companion of its distinguished predecessor.

Most teachers of materia medica think that it would be better to completely separate pharmacology from therapeutics; but Dr. Phillips is not of this opinion, and considers that they may be conveniently discussed side by side in one work, and that their study should be carried on simultaneously. In the present volume, more space is devoted to pharmaceutical chemistry than is now usual in works on materia medica; and this the author thinks to be a distinct advantage both to students and to practitioners. How far he is right in his estimation of the requirements of medical men remains to be seen; but we must confess that, in our experience, very few in active practice find much time to devote to chemistry.

A great feature in the present work is the systematic manner in which the author deals with each drug. First, an account is given of its mode of preparation, followed by its characters and tests, and the mode of absorption and elimination. The physiological action is then discussed, usually very fully, and an account is given of its toxic properties and of the *post mortem* appearances it produces. The theory of its action is considered, and its synergists and antagonists receive adequate attention; the last subject including a description of the antidotes to be administered in cases of poisoning. Under the head of therapeutics, a separate paragraph is devoted to each disease. This arrangement is excellent, and greatly increases the value of the work as a book of reference. Most of the chapters have been carefully written, and many of them are excellent and contain much original work, the result of many years' practical experience.

The chapter on Phosphorus is one of the best in the book, and should be read by every one who is not thoroughly and practically acquainted with the almost unlimited resources of this powerful remedial agent. The author rarely gives it in the large doses recommended by recent writers, but finds that its full therapeutic effect may be obtained from, at the most, 1-50th of a grain three times a day. Speaking of intercostal neuralgia, he says: 'For upwards of twenty years I have been accustomed to use phosphorus in this affection, and can speak favourably of its power. I have notes of fifty-six cases, wherein the pain quickly subsided under this treatment, and did not, so far as I know, subsequently return. In some instances, phosphorus succeeded where arsenic had quite failed. The dose was 1-100th to 1-50th part of a grain three times a day.' He adds: 'With regard to the dose of phosphorus in neuralgia and nerve-disorders generally, I may say that, in my experience, the comparatively large doses recommended by Dr. A. T. Thompson cannot be tolerated for any length of time by the system. They may seem at first to stimulate, or rather *over-stimulate*, the nerve-centres, but after a short time they depress in a disastrous manner; whilst the small doses of 1-200th to 1-50th part of a grain, continued for due time, nourish and strengthen nerve-tissue without any evidence of undue excitement. A therapeutical, and not a physiological, action is to be always desired.' The author speaks highly of the action of phosphorus in phthisis, having employed it, with marked success, in over eight hundred cases. He finds that, although it will not cure advanced phthisis, it will in many cases arrest its progress, at all events, for a time. It improves the condition of the throat and voice, relieves the dry harassing cough, and arrests the colliquative diarrhoea and night-sweating. Its use is not altogether free from danger, for, when there is a

tendency to hæmorrhage, it may induce hæmoptysis. With regard to the treatment of poisoning by phosphorus, the author points out that sulphate of copper and oil of turpentine are the best antidotes. With any soluble salt of copper, phosphorus forms a black phosphide, which is not poisonous; and, as cupric sulphate is a powerful emetic, it is specially indicated when the poison has been taken by the stomach and the remedy can be at once applied. Five grains should be given every two or three hours until free vomiting is induced, and should then either be continued in smaller doses with opium, or turpentine may be substituted. It is not, as the author very properly points out, every kind of oil of turpentine that is an antidote to phosphorus. The pure German and American turpentine are useless, and it is the crude acid French oil, or that which has become ozonised by long exposure, which gives reliable results. The explanation of this apparent anomaly is given in considerable detail.

Although the author constantly gives us the results of his own ripe experience, he is not unmindful of the claims of others; it fact, his work fairly bristles with quotations and references. In the section on the Physiological Action of Arsenic alone, there are over eighty references, including abstracts from the papers or writings of Guy, Hunt, Ludwig, Farquharson, Erasmus Wilson, Hirtz, Gubler, Roux, Astley Cooper, Graham, Morgagni, Agricola, Christison, Duchenne, Charcot, Ringer and Murrell, Claude Bernard, and other well known observers. In some instances, we are bound to say, the author has been too conscientious, certain chapters being overburdened with references and quotations. When a mode of treatment is generally adopted, it may be regarded as common property, and it is unnecessary to give credit to any particular individual.

Under the head of Iodine, an excellent account is given of the injection of Morton's solution in the treatment of spina bifida and chronic serous effusion in the knee-joint, special reference being made to the cases published by Mr. Gould and Mr. Macnamara respectively. Dr. Phillips himself appears to have had very considerable experience of the use of iodine injections, and his two cases of pericardial effusion treated by this method will be read with interest, and are deserving of attention. He also records in detail some very remarkable cases of abdominal and ovarian cysts treated by tapping and the free injection of iodine. In cases of meningitis, apparently tubercular, he has seen marked benefit from the free administration of the iodides, either alone or in combination.

Dr. Phillips gives an account of a few drugs, such, for example, as gold, barium, and cadmium, not often used in medicine; but, as a rule, he keeps to the beaten tract, and is content to tell us what is known about our old friends. Taking it on the whole, the book is admirably done, and cannot fail to become a speedy favourite with both students and practitioners. To the therapist, it is a mine of wealth.

Eczema and its Management. By L. DUNCAN BULKLEY, M.D., etc. Pp. 344. London: Churchill. 1881.

THIS is a more detailed treatise than the well-known one of Dr. McCall Anderson on the same subject, and presents a good practical summary of modern views. Few will open it without finding some fresh suggestions and useful hints, though they may

notice, at the same time, a certain amount of verbiage and a good deal of repetition.

Statistics of 2,500 cases are given, with the conclusion that this malady forms nearly half of all cases of cutaneous disease, and 180 different names for its manifestations are enumerated! (p. 35). As to causation, malaria is said to be of little influence, asthma is found closely allied, also gout, but not rheumatism, renal, or lung disease. Under this last heading, bronchitis should have been excepted, for its intercurrent with general eczema is not infrequent, and is, in fact, alluded to elsewhere in the volume. Under *Diagnosis*, it is noticed 'the itching of scabies is much less than that of eczema; it is far more bearable'. That depends; it is not always so. Much attention is given to the question of local *v.* constitutional origin, and Dr. Bulkley, after ample observations of the Vienna teachings, still has little difficulty in recognising the latter—the constitutional origin—as the main fact, though he 'does not ignore the importance of local cell-action'. He has seen repeated instances where gout, eczema, and asthma alternated in various generations and branches of a family in such a manner as to lead to the conclusion that they were intimately connected. He might have added that this problem was well worked out by Anstie, who included neuralgia in the list.

Eczematous subjects are roughly classed as gouty, strumous, or neurotic, answering, in the main, to Erasmus Wilson's 'assimilative, nutritive, and nervous debility'; but the American writer's meaning is the clearer of the two.

With the observation that 'tobacco, if used at all in excess, has a most harmful effect in eczema', we have not before met. Tea is also blamed.

Under *Treatment*, the author recognises the disease as one always 'of lowered vitality', at the same time that he insists strongly and properly on the importance of 'unloading the liver', etc. He records a protest, however, against the now general use of mineral waters, and prefers blue pill and colocynth, or, for habitual constipation, aloes and iron sulphate; for children, calomel, with rhubarb and soda. As to internal remedies for itching, he discountenances sedatives, but has seen benefit from gelsemium. For general treatment, acetate of potash, with nux and quassia, divides the honours with the mixture of sulphates. Amongst practical points of external treatment, he objects to most of the advertised soaps, and notes that glycerine irritates some skins; also that vaseline and its congeners often fail as a basis, since, 'owing to their great fluidity at the temperature of the body, they do not hold the medicament in position and protect parts from the air sufficiently well'. He favours little washing, and, in general, soothing treatment. For chronic cases, any stimulant measures should be 'brisk and sharp', not continuously irritant. Favourite ointments with him are: Tannin (3j to 3j), and zinc oxide, 3ss—3j, with 3j—3iij of tar ointment in an ounce of cold cream.

The risks and the value of caustic potash are fairly pointed out with illustrations (1) of a severe erysipelas after one strong application; (2) of the cure of a bricklayer's chronic thickened hand by a twenty-grain solution. Eczema behind the ears, commonly obstinate, will often bear stimulation well, *e.g.*, by the compound tincture of green soap, which should be followed by diachylon ointment. Between the toes, where the malady is perhaps still more troublesome, the same ointment, or a tarry one, foot-baths containing tannin, and dusting with acetate of aluminium, are recommended. For eczema of the hands,

rubber coverings are moderately praised; for eczematous and varicose ulcers of the legs, rubber bandages are spoken of much more highly than English experience would support. For eczema about the anus, brief bathing with very hot water, and subsequently tannin ointment, is a treatment that has answered well. For pruritus vulvæ, chloral with camphor is a good suggestion; the writer has found chloral alone very good. For 'eczema marginatum', or an allied rash in the axilla, sulphurous acid is ordered, but a lotion containing bismuth and perchloride of mercury, with spirit, well deserves mention. For general eczema of the trunk, after an alkaline bath, carbolised glycerine of starch is rubbed on; the application of tinctura ferri perchloridi does not seem to be known, but it well deserves trial in later scaly stages: Hebra's prolonged warm bath should also be remembered.

The formulary at the end is comparatively simple, probably in accord with the teaching that it is better to know how to use a few remedies well, than many slightly. Stillingia is the only unfamiliar drug, and that seems ordered as a diuretic. Bartholow speaks of it as antiscrofulous and antisyphilitic. Iodoform deserves a place.

The book is well printed and easily read. A few peculiarities reveal its nationality. 'Skeptical' and 'fullness' look curious; 'will' is often put for 'shall', and we notice, *en passant*, 'ilily defined', 'gotten ready', 'in this location', 'in its incipency', 'I had him employ'. Still, these points are secondary, and the brief excerpts above given indicate a copious store of practical information. Dr. Bulkley's name would indeed be a guarantee as to this.

E. MACKEY, M.D.

Lectures on the Pathology and Treatment of Lateral and other forms of Curvature of the Spine. By WILLIAM ADAMS, F.R.C.S., Surgeon to the Great Northern Hospital, etc. 2nd edition. London: Churchill. 1882.

In the introductory lecture, the author refers to the 'absence of any facilities in the hospitals of this metropolis for the clinical study of cases of spinal deformity; the result being that very little advance has been made in our knowledge of the causes, mode of production, and pathological changes in some cases of deformity of the spine'; that, with regard to lateral curvature, there is 'no fixed pathology', and, therefore, the principles of treatment are undetermined. The work before us, however, shows that, if nothing has been done in the general hospitals to elucidate the pathology of lateral curvatures, yet its author has not failed to make excellent use of many opportunities to inquire into and record the pathological conditions which are associated with the origin and progress of this deformity.

In discussing the mechanism of motion in the spinal column, and the essential difference between its flexibility and the free motion allowed in the movable articulations of the extremities, the author remarks upon the absence of 'surface-play' between the bodies of the vertebræ, and the mechanical arrangement of the oblique articulating processes. By this peculiarity of construction, the spine is maintained in an erect position by the smallest possible expenditure of muscular force; and the position of the spine, when the individual stands erect, is due to mechanical construction, and not to active tension of the muscles; in fact, the muscles are in a state simply of 'vigilant repose,

ready on the instant to check and limit the flexion of the spine when its balance is disturbed'. Mr. Adams states that the flexibility of the bodies of some gymnasts depends more upon movement in the ball-and-socket articulations of the hips and head than upon movement between the vertebræ. The theory, that the dorsal muscles take so small a part in the maintenance of the spinal column in an erect position, accords with the experience of the author concerning the origin of lateral curvature. He finds that, in about half the number of cases which come before him, the dorsal muscles are not apparently weak.

Curvature depends greatly upon the constitutional conditions, such as hereditary tendency, 'which may be traced, probably, in half the cases which come under our notice'; also, 'a strumous diathesis, associated with which the worst forms of curvature, often erroneously classed as cases of rickets, are frequently seen; and constitutional debility, either existing from infancy or induced by febrile affections, etc.' Cases occurring before twelve years of age are chiefly due to hereditary tendency. In those occurring after that age, 'local causes, acting mechanically so as to disturb the equilibrium of the spinal column, are usually, if not always, the direct cause of the deformity'.

These local causes consist in bad habits of position, or in positions peculiar to various occupations, or in obliquity of the pelvis. Such local causes do not act by unequal muscular action, but by producing unequal pressure upon the two lateral halves of the spinal column. The spine being bent to one side, pressure is brought to bear chiefly upon the articulating processes of that side. At the age of puberty, these processes are not thoroughly ossified, and, therefore, they are soon influenced by undue pressure. 'The joints of the articulating processes being situated posteriorly as well as laterally, the spinal column cannot yield in their direction without wheeling partially round; and it is owing to this rotation that the transverse processes, and the ribs, are directed obliquely backwards upon the convex side of the curvature.'

A great many other interesting points connected with the pathology and symptomatology of the affection are ably and fully discussed, and a short chapter is devoted to anterior and posterior curvature of the spine.

The treatment is to vary in accordance with the condition of the patient and with the cause. Partial recumbency, gymnastic exercises, constitutional treatment, and mechanical support and pressure, are one or other, or all, to be used. Referring to some other plans of treatment, the author entirely disapproves of Dr. Sayre's mode of treatment, and he observes that, at the time of application of the jacket during suspension, 'some improvement is effected, and the patient commonly gains from half an inch to one inch in height from the straightening of the spinal curvature; but', he writes, 'I have always observed that the gain is quickly lost, so that the jacket fails "as a curative agent".'

The impossibility of fixing the spine by a plaster-of-Paris jacket, will probably before long be recognised by all practical surgeons; and we shall not be surprised to find in the next edition of this work that the author's recognition of the fact that the spine is not retained in one position by the jacket, will have led him to doubt its usefulness in the treatment of caries of the spine. At present,

p. 272, however, he is still an advocate of Dr. Sayre's plan of treatment of Pott's disease.

The careful and systematic style in which this author usually writes is maintained in the volume of which we have now given but a scanty review.

E. NOBLE SMITH.

Opium-Smoking in America and China. A Study of its Prevalence and Effects, immediate and remote, on the Individual and the Nation. By H. H. KANE, M.D. New York: G. P. Putnam's Sons. 1882.

WE are inundated with works on opium-eating and opium-smoking. It would almost seem as if every one who had ever seen an opium-pipe or heard of opium-smoking had an irresistible desire to record his opinion on the subject. However, we must not grumble at Dr. Kane's book, for he is the author of a popular work called *Drugs that Enslave*, and is, if we mistake not, the medical superintendent of the De Quincy Home at New York City. He gives us, to begin with, an excellent bibliography of the subject, and for this we cannot be too grateful. He tells us in his preface that the first white man who smoked opium in America was a sporting character named Clendenyn. This was in California in 1868. The second, induced to try it by the first, smoked in 1871. The custom gradually spread, and is said now to be extremely prevalent in America. Those who know most about the matter 'are those theatrical people and travelling salesmen, who having become slaves to the habit, make it their business to find out at every city or town at which they stop whether there are smoking houses there, so that they may enjoy the companionship of others in their vice'. These people say, according to Dr. Kane, that there is hardly a town of any size in the East, and none in the West, where there is not a place to smoke and Americans smoking. It is true that in many towns there is no regularly established opium-house, but there is always a Chinese laundry, the back room of which serves the purpose. Many habitual smokers, when starting on a tour of acting, gambling, or selling goods, feel so certain that the implements and drug can be obtained at every place at which they stop, that they take neither pipe nor opium with them.

The question will naturally be asked of what class are those who smoke opium; the answer is, representatives of all classes; merchants, actors, men of leisure, sporting men, telegraph operators, mechanics, ladies of family, actresses, married women, and young girls. Those who have the most leisure, those on whose hands time hangs heavily, are the most prone to drift into the habit, and be carried away by it.

Perhaps the most interesting part of Dr. Kane's book is the chapter devoted to the treatment of the opium-habit. The drugs on which he places the greatest reliance are capsicum, digitalis, and cannabis Indica, in large and frequently repeated doses. He gives bromide of potassium and bromide of sodium when there is much reflex nervous trouble. The bromides should be given freely diluted with water, and in doses of not less than a hundred grains twice a day for a few days. Bismuth and catechu in large doses are given for the diarrhoea; chloride of gold and sodium, half a grain every two hours, or gelseminum, for the pains in the limbs; massage and electro-massage, hot baths, and cold spray for the same purpose; oxide of zinc and atropia for the

profuse perspirations, and hyoscyamia and chloral to produce sleep. Stimulants, of which iced champagne is the best, should be freely used for twenty-four hours only. Later, to relieve dryness of the throat, jaborandi is used; and for bronchitis, chloride of ammonium and benzoic acid. Tonics, short warm baths, with cold douche or spray, phosphorus and cod-liver oil, and out-door exercise, are all useful at times. The treatment can be satisfactorily carried out only in an establishment where the patient can be watched day and night for at least a fortnight.

Dr. Kane's work is full of interesting and amusing anecdotes, and is well worth reading. There are a few illustrations; one of the most striking being of a private smoking-room in China, showing the style of bunk, and representing a wealthy young man 'commencing his downward career'.

WILLIAM MURRELL, M.D.

Studien über Künstliche Glieder. By Dr. O. KARPINSKI, Oberstabs und Regiments-arzt. Berlin: E. S. Mittler und Sohn. 1881.

Studies on Artificial Limbs. By Dr. O. Karpinski. 1881.

THIS work is entirely devoted to the consideration of artificial limbs intended to take the place of limbs removed by amputation. The sparseness of literature on the subject makes a treatise of this nature written by a surgeon of special experience particularly valuable; and it will no doubt be welcomed by many members of the profession who have hitherto, from want of experience in this matter, been constrained to place themselves and their patients entirely in the hands of the instrument-maker.

In the introduction, an appeal is made to surgeons to persevere in attempts to improve existing prosthetic apparatus, and the slow progress in this direction is referred by the author to the deficient interest taken in the matter by surgeons in general. The improvement in the construction of artificial limbs, which has of late taken place in America, is in part ascribed to the greater practical interest in the subject taken by American surgeons; although there, as in Germany, it must not be forgotten that the recent great wars, by inundating the country with maimed persons, especially of the middle classes, no doubt led to increase of competition amongst surgical mechanicians, and consequent improvement in their productions.

The introduction is followed by a critical history of prosthetic apparatus carried back to the mention, by Pliny, of an artificial hand made for a soldier maimed in the second Punic war. In this section, all the artificial limbs which have specially marked steps in the progress of the art are minutely described and commented upon, and thus a very complete description is furnished of mechanical substitutes for deficiencies of the upper and lower extremities in each and every degree; the only exception, apparently, being that of apparatus designed to remedy defects caused by partial amputations of the hand. This sketch illustrates particularly well the rapid progress of the older workers to complicated mechanism designed to carry out the normal functions of the lost member; and, further, the necessary inconvenience and weight of such apparatus, which led first to its unpopularity, and, later, to a gradual return to simplicity of construction, combined with lightness, sufficient strength, and durability.

The third chapter is devoted to a critical consi-

deration of the various materials of which the component parts of an artificial limb should be made, and as to how far efforts to imitate the movements of nature should be carried. Many useful practical details are given regarding methods of fixation, points of bearing, clothing of the stump, the preservation of the apparatus in good working order, and the need of instruction and supervision in the use of the limb by the patient on the part of the medical attendant. On the subject of joint-mechanism, the author enters rather fully, but is, on the whole, restricted in his recommendation of it, any attempt to 'caricature' the natural movements being specially deprecated. India-rubber and spiral metal springs he considers troublesome and liable to get out of order; and he finds the same fault with the solid India-rubber foot, of which much was expected (viz., the amount of force needed to utilise its elasticity), which has been experienced by surgeons in this country. He has found the uncertainty in locomotion, accompanying the possession of a movable knee-joint, to exceed the advantages gained, and recommends a joint capable of flexion by pressure only, when the patient wishes to sit, supplemented by a movable ankle-joint. For poor patients, and those of the artisan class, his opinion coincides with that held by medical men in this country, recommending an ordinary wooden leg as cheaper at first cost, seldom needing repair, its use being easier to learn, and it being stronger and less likely to get out of order. A wooden leg with an enlarged lower extremity, working with a hinge between India-rubber buffer cushions, is favourably spoken of; and some interesting observations are appended, showing the influence of movable joints in equalising the length of stride with the artificial and normal limbs. For similar reasons, in the upper limb, the possession of an apparatus provided with complicated semi-automatic mechanism is restricted to the upper classes; a simple arm, into which various instruments can be screwed, being preferred for the artisan class.

The book is concluded by an appendix, containing tables of the cases on which the practical part of the work is based, and copies of regulations regarding the supply of artificial limbs to army pensioners (see also pp. 214 and 215). These, as showing the prime cost, cost of repairs, length of wear, etc., should render the book especially interesting and useful to naval and military surgeons.

The illustrations are collected into the form of a separate atlas, consisting of fifty plates, each comprising several engravings. The drawings are well executed in outline, and render great aid in comprehending the mechanism of the numerous apparatus described.

Although burdened with some repetition, and being for the ordinary reader somewhat lengthy in the historical section, the book nevertheless offers a fairly concise statement of our present knowledge of the subject, and, from its eminently practical nature, cannot fail to prove exceedingly useful to any surgeon needing instruction thereon.

G. H. MAKINS.

Handbuch der Historisch-geographischen Pathologie. By Dr. AUGUST HIRSCH.

Handbook of Historico-Geographical Pathology. By Dr. HIRSCH.

THIS work does not pretend to original research, but is a *résumé* of most of the best writings on epidemic diseases. In each case the history of the disease is

given, its geographical boundaries (where such exist), and its susceptibility to the influences of soil and climate; its fatality among various races, and the mode of its communication, are separately considered.

Scarlet fever is a disease of the temperate zone, and is almost confined to the north and centre of Europe and of North America. It occurs only in single cases in tropical regions, where it is of a mild type and does not spread. The coloured races are almost entirely free from it.

Malarial fevers, on the contrary, are far most prevalent and fatal in tropical and subtropical countries, particularly in Bengal, Bombay, China, and on the African coast; in Europe they are common in Russia, the neighbourhood of Rome, and the valley of the Po; while in Australia, Tasmania, and New Zealand such diseases are practically unknown, or occur only among troops recently arrived from India. The Ethiopians suffer least from malarial fevers, which are very fatal to the Caucasian Race. That malaria is not confined to low marshy districts alone, is shown by its prevalence on the dry Roman Campagna and on the plateau of the Deccan; still the conclusion drawn is, that a damp marshy soil under the influence of a high temperature is a very important factor in inducing malaria, but is not sufficient to cause it without the previous existence of a specific bacillus; this view has lately received remarkable confirmation by the experiments of Klebs and Tommasi-Crudeli. According to Colin, malaria is caused by the '*puissance végétative du sol*', where there is not a sufficiency of plants to absorb this fertilising power.

Appropos of the malaria bacillus, the following experiment is related. Several boxes filled with earth from a highly malarial district were transported to a district where malarial fevers were unknown. They were placed outside the windows of a room in which two young men slept, and during the night the windows were left open. After six days both the inmates complained of illness, and on the twelfth and fourteenth days respectively were attacked by malarial fever, which yielded to quinine.

Yellow fever is a disease of the tropics, prevailing chiefly on the sea-coast, and on the banks of large navigable rivers. Heat of 80 deg. or upwards is necessary to the rise of the fever, which, however, will continue at a lower temperature; and 'to terminate, an epidemic ice must form on the surface of the ground'. Yellow fever, Dr. Hirsch maintains, is not a malarial fever; it exists, with rare exceptions, only in large towns, and is extremely fatal on shipboard. It is especially dangerous to new-comers from cool latitudes, but natives and acclimatised persons possess comparative immunity from it.

The article on malarial fevers is perhaps the best in the book; but all the articles are carefully compiled, and will be very valuable for reference.

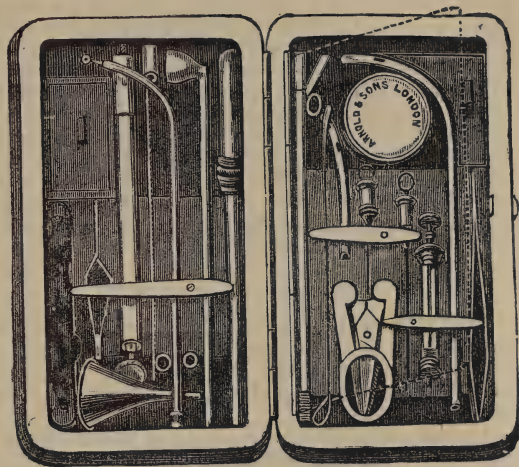
ANGEL MONEY, M.D.

NEW INVENTIONS.

SURGICAL POCKET-CASE.

This surgical pocket-case, designed by Mr. W. A. Thomson of Amptill, and manufactured by Messrs. Arnold and Sons, for the purpose of supplying surgeons and general practitioners with a complete, portable, and compact case of really useful and necessary instruments, to be carried during

the daily rounds of visiting, as well as when sent for to an urgent and unknown patient. The case contains nearly everything a surgeon can require on an emergency, besides many things of daily utility and necessity; and, instead of pondering over what instruments are to be taken out each round, or to a sudden call, the surgeon has simply to put this case (besides his stethoscope) in his pocket, and thereby save much time, and perhaps gain much credit, by having what he will require with him, instead of having to send or go back for the necessary article.



One side of the case contains a clinical thermometer and caustic-holder (combined), in plated metal case; Corrigan's actual cautery-button and director (combined); Bellocq's epistaxis-cannula; finger-saw; exploring needle, in ivory case, with screw fittings to act as handle to the saw; Toynbee's ear-speculum, holding litmus paper, and constructed to act also as a tracheotomy-tube, if desired; bull-dog forceps; straight bistoury; gum lancet; Fergusson's knife and aneurism-needle, mounted together in tortoise-shell; and a compartment to hold lamels, discs, and vaccine points.

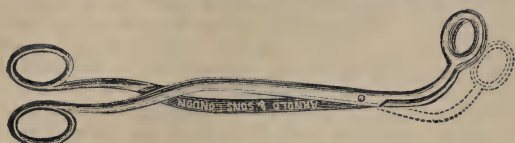
The other side contains dressing forceps; medium-sized silver-plated catheter, adjustable as male or female; probe (inside catheter); Chesterman's patent metal measuring tape; hypodermic syringe and needles; aspirating needle, fitting to the hypodermic syringe; folding steel scissors; Imray's double ear-scoop; and a compartment for thread, wire, and surgical needles. In all, there are twenty-five full-sized, efficient, and highly finished instruments, besides the other necessities before-mentioned, all of which are held securely together in their proper places by means of metal pivot bands.

The case measures about five and a half inches in length, three in width, and one deep. It is shaped and opens like an ordinary cigar-case, with the addition of a thin leather leaf in the middle, useful for holding plaister, lint, oiled silk, etc.

INSTRUMENT FOR EXCISION OF TONSILS.

Dr. Studdert, Surgeon to the Erith Cottage Hospital, having recently been called upon to excise a number of enlarged tonsils, has used an instrument, invented by himself, and manufactured for him by Messrs. Arnold and Son, with the greatest success,

of which the following is an illustration. The mode of his operation is as follows. Having firmly grasped the tonsil, he draws it towards the mesial line; and then, with a probe-pointed and curved bistoury,

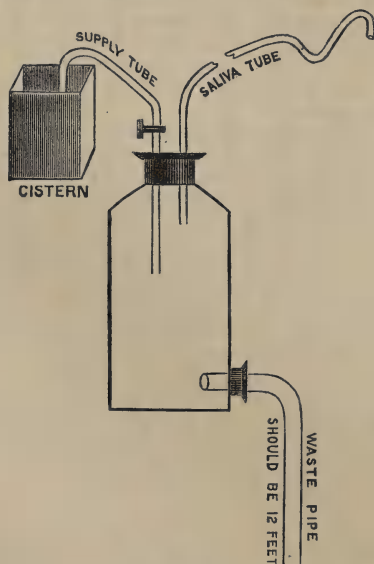


rapidly cuts through the tissues, 'keeping the blade in direct contact' with the enlarged grasping end of his forceps. The following are the advantages which Dr. Studdert claims for this instrument. 1. It is extremely simple and easy of application. 2. By attending to his direction of keeping the blade of the bistoury in contact with the blades of the forceps, all danger of hæmorrhage from wounding the internal carotid artery is avoided. 3. The instrument can be used for either the right or the left tonsil. 4. The groove on the edges of the circular blade gives great grasping power.

A NEW SALIVA EJECTOR.

Messrs. Smale Bros., have a new saliva ejector, invented by Mr. Morton Smale, and recently exhibited by him at the Odontological Society of Great Britain. It is, perhaps, best described in his own words.

'I have it fitted to my operating room. Its advantages are its simplicity, its always being ready for use, occupying little space, and doing its work thoroughly; after some months' trial, I am perfectly satisfied with it in every way. The suction would, probably, be sufficient to carry away blood, and would be very useful in operations in the mouth. I have not yet been able to try this, but hope to do so when I have a long case of extraction.



'The things necessary are a cistern above the operating room, a bottle, and some tubing of two different calibres. The water coming from the cistern is regulated by a tap in the operating room; for, when once working, very little water is necessary to keep it going. Directly the water rises above the

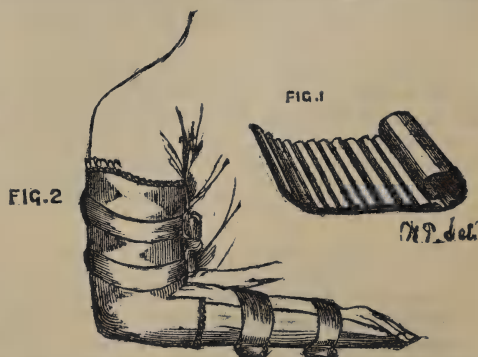
level of the waste-pipe, it runs over into it, taking the air with it. No air can enter save through the saliva pipe (both corks being hermetically sealed), and, consequently, the suction in that tube is very great; and if the bottle be put under the floor, or under a chair, gravitation, in addition to suction, helps the process. The waste-pipe must be larger than the supply-pipe, and should be about twelve feet long. It is best to carry that tube out through the wall or window-sash, and to let it enter the water-pipe on the outside of the house. In my own case, this tube is put through the floor of the operating room into the kitchen, and through the kitchen window, and into the water-pipe. Messrs. Smale Bros., of Marlborough Street, have one fitted up, and in working order; or I shall be glad to show my own to anybody wishing to see it. I find it useful, not only when stopping, but also taking, impressions, or when cooling impressions with water, to run off the water from the mouth. For the idea and practical carrying of it out, I am indebted to my friend Mr. Fairles.'

CHEKAN.

Messrs. Wyley and Co., of Coventry, have introduced to the notice of the profession some preparation made from the leaves of the *Eugenia* or *Myrtus Chekan*, an evergreen shrub somewhat resembling the ordinary myrtle, and indigenous to Chili. Messrs. Wyley's preparations comprise three samples of liquid abstract of chekan of varying strengths, and a syrup of chekan, half the strength of the liquid extract, and especially recommended for children in the place of the liquid extract. We have also received samples of an essential oil of chekan, to be used for inhalation in cases of diphtheritis, laryngitis, and diseases of that order. This new therapeutic agent has been tried by English hospitals in bronchitis and bronchorrhœa, and Dr. Murrell reports very favourably of the results he has obtained from it, especially in chronic bronchitis. Chekan has also been successfully employed by continental physicians in inflammatory affections of the pharynx and larynx, and in catarrhal cystitis, gonorrhœa, and leucorrhœa. The London agents for the sale of the chekan preparations are Messrs. Wyley, Walker, and Co., 223, Upper Thames Street, E.C.

A NEW MATERIAL FOR SPLINTS.

The following is a description of a new material out of which splints may be fashioned, of which the accompanying woodcut is an illustration. The ma-



terial is chiefly useful as a cheap substitute for the well-known 'kettle-holder' splinting, which consists

of thin strips of wood glued on to canvas or leather, so that there is flexibility in one direction, with stiffness in the other. In the new material, the same end is attained by the principle of corrugation. It consists of two layers of stiff brown paper glued together, one flat, and the other plaited into ridges and furrows. A remarkable degree of stiffness in the direction of the corrugations is thus secured, while at right angles to them there is complete flexibility.

The material is extremely light, and the tunnels which the corrugations form serve for ventilation, and are very useful in keeping the limb contained in the splint cool; while, if extra stiffness be required, wires of any useful thickness may be passed through them. Another way of increasing the strength of the splint is to use two layers of the material placed face to face, so that the corrugations fit into each other; in this way the stiffness is doubled with hardly any increase of bulk, and a full-sized back splint for the patella, abundantly strong, but very light, may in this way be cut out with a pair of ordinary scissors in a couple of minutes.

Mr. Walter Pye has found the greatest employment for this material in the fashioning of angular elbow-splints, as shown in the cut, especially in the case of arthritis in children, where the lightness and coolness of the support are much appreciated. He finds that ordinary webbing straps and buckles are the most convenient way of securing the splints round the limb. The material being paper, it is not fitted for any cases where there are discharges, or where moist dressings are employed, for it soon becomes sodden. The makers are Messrs. George M. Smith and Co., 47½, Arlington Street, Islington, N., and it is extremely cheap.

In connection with this subject of corrugation of splinting materials, Mr. Oates of Malvern Wells writes (*Brit. Med. Jour.*, March 25) that, twenty years ago, he began to employ thin metal splints, corrugated so as to give them necessary stiffness. These would of course be able to be washed, and no doubt the principle might be applied to other materials as well, though few would be as light as paper, or so readily fashioned.

A RATIONAL BOOT.

The human foot has suffered, perhaps as much as any portion of the body, from following the vagaries of fashion—in one sense, probably more so, as both men and women indulge in that particular shape of covering for the lower extremities, the prevalence of which is dictated by fashion; while in that of tight lacing the 'weaker' sex are alone the foolish exponents of a system that carries injury to health and comfort in its train. It will be recollected by many of our readers, that Professor W. H. Flower, some time since, in lecturing on 'Fashion in Deformity' at the Royal Institution, spoke particularly on the manner in which boots and shoes are made in all parts of the civilised world, saying they were constructed upon a principle of bilateral symmetry. He observed, 'a straight line drawn along the sole

from the middle of the toe to the heel will divide a fashionable boot into two equal and similar parts, a small allowance being made at the middle part or "waist" for the difference between right and left foot. Whether the toe is made broad or narrow, it is always equally inclined at the sides towards the middle line, whereas in the foot there is no such symmetry.'



Fig. 1.

The accompanying engravings of the foot in its natural form, and as it appears in its deformity, brought about by wearing 'tight' or 'fashionable' boots, render further remark unnecessary. Mr. Flower

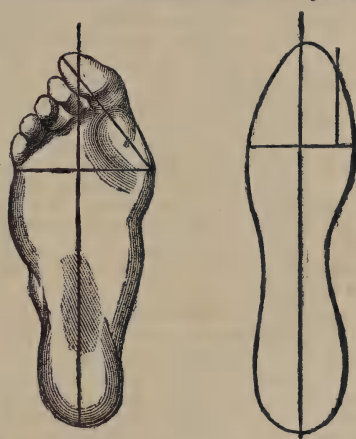


Fig. 2.

also remarked, that no sensible person can suppose that there is anything in itself ugly, or even unsightly, in the form of a perfect human foot; and yet all attempts to construct shoes upon its model are constantly met with the objection that something extremely inelegant must be the result. The effect of this lecture was so impressed upon the mind of Mr. Thomas Parker, of 175, Oxford Street, that he immediately turned his attention to the construction of a boot based upon Professor Flower's views, and the 'Alukipos' boot is the outcome of his ideas. The other two illustrations represent the shape of the 'Alukipos' boot, and that of those ordinarily made.

The new boot is made of soft pliable leather, cut quite seamless on the inner side, and is specially

adapted for those, who, apart from having injured the *contour* of their feet by wearing the fashionable-shaped shoe or boot, naturally suffer from tender feet or swollen joints, while for gouty or rheumatic persons it is invaluable. It is made both for ladies, for gentlemen, and for children; and, if worn for a short time would, we believe, soon cause prejudice as to shape to give way, in the increased comfort and freedom from all pain which its adoption would bring about.

MISCELLANY.

THE Rev. J. M. Strachan has been appointed Bishop of Rangoon. Dr. Strachan is a Doctor of Medicine.

THE great Lecaze prize of 10,000 francs has been awarded to Dr. Brown-Séquard for his valuable researches and discoveries in physiological science.

THE RADICAL CURE OF CANCER.—Dr. J. Collins Warren of Boston, U.S.A., in October last, who was delegated to receive competing essays on the subject of the radical cure of malignant disease, announces that three essays were presented. In the consideration of their merits the assistance of Dr. George B. Shattuck, editor of the *Boston Medical and Surgical Journal*, was invoked; and it has been decided that no essay is worthy of a prize. The same subject, namely, 'The Probability of the Discovery of a Cure of Malignant Disease, and the Line of Study or Experimentation likely to bring such a Cure to light', is proposed for essays to be presented in competition not later than the first day of December, 1883, to Dr. Warren, who, with such assistance as he may select, will be the judge of their merits. For the best essay on the above subject a prize of One Thousand Dollars will be given, the right being reserved to withhold the prize in case no essay of sufficient merit be presented. The essays must be legibly written in English, and neatly bound. Each one must bear a motto, and be accompanied by a sealed envelope bearing the same motto, and inclosing the name and address of the writer. They will all remain in the possession of the donor of the prize for convenience of reference, and the privilege is claimed to publish the successful one, with the name of the writer. No writer, however, surrenders the privilege of retaining a copy of his essay, and publishing it. The decision concerning the merits of the essays will be made chiefly from a practical stand-point, it being the object of the donor of the prize to obtain suggestions by which a search for a cure for cancer may be instituted.

A CASTOR-OIL FAMINE.—The prospect of a castor-oil famine is held out in a recent issue of the *Liverpool Journal of Commerce*, which publishes a series of figures to show that the stock at present held in this country and afloat for importation is considerably less than was the case at the corresponding period of 1881. The following figures explain the position:—Quantity afloat for United Kingdom this time in 1881, 27,681 cases; quantity afloat for United Kingdom at present, 18,263 cases; decrease, 9,418 cases. Average consumption per month, 1881, Liverpool, 4,900 cases; consumption for month of January 1882, 7,500 cases; increase, 2,600 cases. Stock in Liverpool on February 1, 1882, 8,300 cases; afloat in ships now due, 1,476 cases; total supply up to middle of March, 9,776 cases. Probable consumption up to middle of March, 10,000 cases. It is, therefore, probable, that about the middle or end of March supplies will fall short of the demand, and, as a necessary consequence, unless there is a diminution of consumption, or early arrivals of vessels carrying castor-oil as a whole or part cargo, prices will rise in proportion to the scarcity experienced.

THE GREAT SEA-ELEPHANT.—A very interesting addition has been made to the Museum of the Royal College of Surgeons; a skeleton of the great sea-elephant (*Macro-rhinus Leoninus* Linn.), the largest of the seal tribe. The animal derives its name from its huge size, and from the

possession in the male of a short proboscis-like prolongation of the nose. It was formerly abundant on most of the coasts and islands of the Southern Ocean, but has now, owing to the destructive warfare carried on against it by sealers for the sake of its valuable oil and hide, become much more rare, and limited to the most inaccessible parts of the Kerguelen and Crozet groups. In the Falkland Islands it was supposed to have been long extinct, but, about two years ago, Mr. H. Mansel, when riding along the coast, saw what he at first took for a boat lying upside down upon the beach. On approaching nearer, he found that it was a great seal asleep. When roused, it reared itself upon its hind quarters and opened its enormous mouth to its full extent, in the manner depicted in the well-known quaint old drawing in Anson's *Voyages*. The next morning, the animal was found at the same place and despatched, and its head was sent to the Museum of the College of Surgeons. As there was no skeleton of a full-grown specimen of this interesting species in England, Professor Flower, the conservator of the Museum, lost no time in requesting friends in the Falkland Islands to endeavour to secure what remained of the body of the animal; and, although it had lain more than a year where it fell, Captain R. C. Packe of Stanley was fortunate enough to be able to secure the greater part of the bones, which have now been mounted, and the nearly perfect skeleton is exhibited in the Museum. It is placed near and can be well compared with its congeners, the walrus, sea-lion, and fur seal. Five skeletons of the two latter species, also from the Falkland Islands, have recently been added to the collections through the kind assistance of Mr. F. Coleman, Secretary to the Falkland Islands Company, who loses no opportunity of rendering his connection with the islands of service to the advancement of science. The extreme length of the skeleton is 16 ft. 6 in., and it is quite easy to imagine how such a creature swimming rapidly through a calm sea with its head raised, and with a long wake behind it, caused by the action of its paddles, placed at the posterior extremity of the body like the screw of a steamer, may have been the foundation of some of the stories told of the great sea-serpent, as was, indeed, suggested some years ago by Professor Owen on the occasion of the reported appearance of that celebrated monster to Captain M'Quhae.

A NEW METHOD OF EMBALMING BODIES AND PRESERVING TISSUES.—Dr. Virodzoeff (*Balsamirovanie*, pp. xi, 164, St. Petersburg, 1881) recommends the following preparations as an efficient agent in the embalming of bodies and the preservation of tissues:

Thymol	5 parts.
Alcohol	45 "
Glycerine	2,160 "
Water	1,081 "

It is cheap, innocuous, free from unpleasant odour, possesses the property of keeping the body soft, elastic, fresh and life-like, and does not ruin instruments. Thymol is selected as being superior to other antiseptics, and glycerine is added, both on account of its own preservative qualities and to retard the evaporation of the fluid. For the preparation of tissues the same solution is employed. If the cadaver be quite lean, or the tissues very delicate, equal parts of water and glycerine (1,620 of each) are combined with the above quantities of thymol and alcohol. To inject a body, half its weight of the fluid is necessary. A properly embalmed cadaver may be preserved indefinitely under ordinary circumstances, gradually shrinking and mummifying without putrefaction. Specimens are either to be injected with or macerated in this fluid. Maceration must not be too prolonged; the appearance of the specimen should act as a guide. The part, after having been thoroughly cleansed with water, and prepared, may then be exposed for months to the air without losing its consistency, form, and colour. Permanent specimens may be enclosed in a hermetically sealed glass vessel containing a little of the same solution. Dr. Peabody has used this preserving fluid, with excellent results, in the New York Hospital Museum.

The London Medical Record.

ROSZAHEGYI ON EXPERIMENTS IN HUNGARY WITH PASTEUR'S INOCULATION FOR SPLENIC FEVER.

PROBABLY no part of the transactions of the recent International Congress in London was of more general interest, both to the medical profession and to the public, than the address by M. Pasteur on inoculation in relation to chicken-cholera and splenic fever. Experiments after his method have been performed on a large scale at the instigation of the Hungarian Ministry of Agriculture, and under the supervision of M. Thuillier, one of M. Pasteur's assistants, who brought with him from Paris the necessary instruments and material. The results of these experiments are given in detail (*Deutsch. Med. Woch.*, No. 2, 1882) by Dr. Roszahegyi, head of the commission appointed to watch them, and they are of considerable interest and importance.

It will be remembered that M. Pasteur found that the bacilli occurring in the blood of animals affected with splenic fever (anthrax, charbon, milzbrand) develop best in flesh infusions at temperatures from 25 deg. to 40 deg. Cent. (77 deg. to 104 deg. Fahr.) At 15 deg. and 45 deg. Cent. (59 deg. and 113 deg. Fahr.), development ceases. In accordance with this, birds, whose body temperature rises to 42 deg. or 43 deg. Cent., are scarcely at all liable to splenic fever. Cultivated at a temperature of 42 deg. to 43 deg. Cent., the bacilli no longer produce spores, but develop into long homogeneous threads; and the longer time they are kept at this temperature, the less virulent they become. While the original blood proved fatal to all the sheep infected with it, the specimens taken from the twelfth day of cultivation killed only half the number of animals infected, and those from the twenty-fourth day did not kill a single one, although all had a slight rise of temperature lasting several days. In cultivations at 42 deg. to 43 deg. Cent., the bacilli remain four to six weeks alive, and capable of inoculation; after that time they die. The process adopted was, therefore, the following. The animals were first inoculated with the twenty-four days' cultivation (premier vaccin), causing a slight rise of temperature, which passes over in twelve days at most. They were then inoculated with the twelve days' cultivation (second vaccin), which again produced a passing rise of temperature, but no fatal cases. Animals that had undergone the 'primary vaccination' were still liable to death if infected with the original blood, but, after the 'secondary vaccination', they possessed an immunity from the full virulence of the poison.

The experiments in Hungary were performed in two series. For the first series of experiments, there were used sixty sheep and ten bullocks (six old and four young), divided into two equal herds. The two herds, consisting each of thirty sheep and five bullocks (three old and two young), were put in precisely similar circumstances, except in one point, and both herds were ultimately subjected to the same 'control experiment' of inoculation with poison of full virulence. The one point in which the herds differed, was that the first herd underwent first the

'primary' and then the 'secondary vaccination' previous to the final 'control inoculation', a period of twelve days elapsing between each inoculation. What, then, were the results of these several inoculations? After the first inoculation with fully weakened material, there died, of the thirty sheep and five bullocks, one sheep, not, however, of splenic fever, but of catarrhal pneumonia, careful experiments being made to prove if there were or were not bacilli in its blood. After the second inoculation, there also died one sheep, probably, but not certainly, of splenic fever. The control inoculation, with the full strength of the poison, was then performed on twenty-five inoculated and twenty-five non-inoculated sheep, five inoculated and five non-inoculated bullocks. For this inoculation there were used anthrax-spores, which had been kept in M. Pasteur's laboratory for five years. What was the result in the two groups of animals? Among the twenty-five inoculated sheep, there was at first no sign of sickness, on the seventh day one sheep died, and on the nineteenth a second. The *post mortem* examinations showed, in the first, great anæmia, with the presence of *Distomum hepaticum*; in the second, changes in the lungs caused by *Strongylus filaria*; but in neither was there a trace of splenic fever. Widely different was the result in the case of twenty-five non-inoculated sheep. On the night between the second and third day, there died eight sheep, next night six more, and, in all, there died twenty-three, twenty-two of which (*i.e.*, 88 per cent. of the whole) showed distinct symptoms of splenic fever, although not always a complete assemblage of characteristic symptoms. The twenty-third sheep was highly anæmic, and infested with distoma. Of the bullocks, only the non-inoculated young bullocks showed a slight rise of temperature. The non-inoculated old bullocks, and the inoculated bullocks generally, showed no sign of sickness whatever.

A second series of experiments was performed in three groups. In the first group, among fifty sheep after the 'primary vaccination', no death occurred; after the 'secondary', five died from splenic fever. After the control inoculation of forty-four inoculated sheep, three fell sick of splenic fever and one died of it; but of fifty non-inoculated sheep, under similar conditions with the last, forty-eight died, only two remaining alive. The second group of experiments were performed on a larger herd. Half of these, two hundred and sixty-four in number, were inoculated with the primary and secondary inoculations, and of these ten died, after the second inoculation, of splenic fever, while twelve got abscesses in consequence of the injection. The inoculated and non-inoculated animals were then turned loose into pastures, where splenic fever had usually caused the death of two to three in the herd weekly. It will be watched how the two groups now react to the anthrax contagium. The third group of experiments under this head were performed on twenty bullocks. Of these, fourteen underwent the two inoculations, six did not. Then all twenty were inoculated with the unweakened poison. The 'primary vaccination' produced no effect whatever. After the 'secondary', one animal seemed slightly indisposed. After the 'control inoculation', only one of the fourteen inoculated animals seemed slightly indisposed, while of the six inoculated animals, four fell seriously ill, with high fever, etc., and one of these died.

As will be seen, therefore, from the above, while Pasteur's inoculation is no absolute protection, it is very nearly so. Of sixty-nine inoculated sheep, only

one (*i.e.*, 1.45 per cent.) died after the control inoculation, while, of seventy-five non-inoculated animals, seventy (*i.e.*, 93.3 per cent.) died of splenic fever after the control-inoculation. The most important control-experiment, however, has still to be performed, *viz.*, the observation as to how the inoculated and non-inoculated animals react to the natural contagium when exposed to it. It will also be noted that the mortality from the inoculation itself is not small, about 14.5 per cent.; and, it seems too that other diseases, previously latent, become manifest during the inoculation. Again, another important point is the multiplication of spores in the carcasses of those animals dying from the inoculation, which spores, on being scattered, may very readily recover their primitive virulence. The commission concludes, therefore, that the general adoption of Pasteur's method would, as yet, be premature, that the private performance of the protective inoculation should be forbidden, and that further experiments ought to be performed.

Whatever practical results may spring from M. Pasteur's discovery, as physicians we must all be watching, with the utmost interest, the development of that discovery. M. Pasteur will for after-generations hold much the same relation to Jenner, that Sir Isaac Newton does to Kepler. As Newton explained the laws of Kepler by gravitation, so Pasteur has explained for us the invaluable empiric fact discovered by Jenner in vaccination for small-pox. We hardly know which to value most, which to admire most highly.

JAMES ANDERSON, M.D.

SIEDAMGROTZKY ON THE EXPERIMENTAL COMMUNICATION OF BOVINE TUBERCULOSIS.

PROFESSOR SIEDAMGROTZKY (*Archiv für Thierheilkunde*, viii. 3, April 1882) details the experiments undertaken by himself, in conjunction with Dr. Birch-Hirschfeld and Professor Haubner, at the instance of the Government of Saxony, in order to decide the question, 'whether, and how far, the consumption of the meat and milk of tuberculous cows is injurious to man.' The inquiry was made at Dresden during the years 1878 and 1879; the report was presented in April 1880, and it has now been made public.

The experiments were made on lambs or young pigs, two species of animals supposed to have the least constitutional tendency to tuberculosis, and absolutely no hereditary predisposition. The lambs or pigs were fed either with the actual tuberculous products of the diseased cow, and with 'miliary tubercles and caseous pneumonia' of man; or with milk from a tuberculous cow. The first pair of lambs were fed for eight days with caseous substance (160 grammes for each), from cavities in a cow's lung, the pleural surface of which was covered with pearly nodules; the caseous substance was made into an emulsion with water, and administered from a bottle. One of the lambs, killed after 269 days, showed no abnormal condition; the other, killed after 117 days, had a thick-walled cavity (with caseous contents), of the size of a walnut, in one lung, together with a few grey and partly calcified nodules, and, in the other lung, certain centres of calcification. The bronchial glands were swollen; and, in the cortex, there were conglomerations of greyish-white translucent nodules.

The second pair of lambs were fed eleven times with pearl-nodules from the serous membranes of various cows, each lamb receiving in all 220 grammes. They were killed after 102 and 135 days respectively; in both there were ulcerations and miliary nodules in the small intestine, and nodules or chalky points in the mesenteric glands; the formations in the intestines and in the lymphatic glands had a characteristic tubercular structure (epithelioid cells and giant-cells). The third pair of lambs were fed with tubercular masses from the human lung and intestine; but the animals were found practically healthy when they were killed. Almost equally negative was the experiment of feeding two lambs with tubercles from acute miliary tuberculosis of man. In one of the animals, there were a few calcareous points in the cortex of certain mesenteric glands. Two lambs were used as 'control-animals'. They received no tuberculous substance, and, when they were killed, one of them had a few small white nodules in the mucous membrane of the small intestine, a few calcareous points in the mesenteric glands and in the bronchial glands, and in one lung a few nodules of the size of a pea, completely calcified and encapsuled; while the other had a few calcareous points in the mediastinal lymphatic glands.

The second series of experiments consisted in feeding lambs and pigs with the milk of cows diagnosed to be tuberculous, and proved to be so *post mortem*. Six young pigs and two lambs were fed with the milk for 142 or 153 days. In the two lambs, the liver was the only organ affected; in one of them it contained twelve, and in the other three nodules, whitish, firm, in size from a millet-seed to a pea, conglomerations of smaller tubercles containing epithelium-like cells, and giant-cells with marginal nuclei. Liver-nodules occurred also in all the six pigs, although they were not considered to be tubercles. They were composed mostly of round lymphoid cells. The lymphatic glands of all the six—either the mesenteric, or portal, or bronchial—contained one or more calcareous nodules. The lungs, also, in five out of the six, contained nodules various in size and in number, which were composed of round lymphoid cells, and were suggestive of lymphomatous growths. Three animals (one lamb and two pigs) were used for controlling the second series of experiments, and were fed with ordinary milk. The lamb had no disease except in the liver, where there was a calcified and encapsuled nodule (old cysticercus). Both the pigs had 'lymphomatous' nodules in the lungs, one of them had a few scattered fibrous nodules in the liver, and the other had three leucæmic nodules in the spleen, as large as peas.

The Commission, in reporting to the Saxon government, expressed the formal opinion that their experiments gave 'no positive support' to the notion of tuberculosis communicated to man from the cow; although, in a more unofficial vein, Professor Siedamgrotzky does not ignore the significance of some of the experiments. In the experiments with milk, the tuberculosis was chiefly in the liver. In general, the induced tuberculosis was very moderate in amount and in the area of its distribution. The effects, such as they were, followed after a considerable interval of time, and there were no symptoms due to them, and in no case a fatal result. The risk of infection is not always the same; different animals have different susceptibility. The infective power of the milk probably varies in like manner; it is most likely to be dangerous in those

cases where there are tuberculous formations in the udder. It cannot escape notice that the two pigs that were used to control the milk experiment, and were fed with ordinary milk, had practically the same tubercle-like formations as the six pigs subjected to the experiment itself.

C. CREIGHTON, M.D.

JAFFÉ ON EPIDEMIC CEREBRO-SPINAL MENINGITIS.

THE seventeen cases which the author relates (*Deutsches Archiv für Klin. Med.*, Band xxx, Heft 3 and 4, 1882), and which were mostly observed by himself, are not recorded for the purpose of setting up new theories concerning cerebro-spinal meningitis, but are intended to correct many errors which exist in regard to etiology, etc. He, therefore, first gives a summary of cases of like nature and of the results of all observations. The author maintains that the meningitic virus is a specific one, and considers it a waste of time to endeavour to prove its connection with other infectious diseases. It is certain that the disease in question is a specific infectious one, which may occur sporadically as well as epidemically, and may be spread by contagious as well as by miasmatic influence. As we are not yet clear as to the nature of the virus, we must, for the present, consider the two questions, as to the origin of the virus and the etiology of the disease, as unanswered; but, as a fact, we can record that it exists, and, as probable, we may assume that it is less a miasma than a contagium. Whether it be fixed or volatile, whether 'vivum' or otherwise, or if parasitic, we know not as yet. Jaffé has examined, microscopically, the blood and exudations found in the cerebro-spinal cavities, but has found no organisms of any kind. He feels himself justified, therefore, in denying that cerebro-spinal meningitis is a parasitic disease (from a modern point of view).

Prodromal symptoms were found in ten cases. Headache occurred in fourteen, vomiting in fourteen, and delirium in ten cases; of the latter, two were of a maniacal character, and had been admitted as suffering from delirium tremens. Episthomonos occurred sixteen times; hyperæsthesia, eight; anæsthesia, once only; ocular changes, ten times; aural troubles, once, in the form of purulent otitis media, with perforation of the membrana tympani. In two pneumonia, in one bronchitis, and in one gangrene of the lungs occurred. There were two cases of ulcerative endocarditis, complicated once with purulent pericarditis. Splenic swelling was observed thrice, passive albuminuria once, arthritic affections five times.

The duration was two or three days as the minimum, four months as the maximum. Ten cases ended in death, seven in recovery; the mortality being 59 per cent. The diagnosis is most difficult in the early days of the sporadic cases. We have to distinguish between the diseases idiopathic (traumatic) spinal or cerebro-spinal meningitis, tubercular meningitis, typhoid fever, intermittent fever, asthenic pneumonia, tetanus, delirium tremens, and acute mania. The etiology of the first disease is an important aid, but it must be borne in mind that wounded persons are most sensitive to the meningitic virus; it is often impossible to distinguish tubercular meningitis, as two of the reported cases show. Typhoid fever is recognised by the gastric symptoms, which soon appear, and

the absence of spinal symptoms, as well as the presence of the splenic tumour; intermittent fever by the beneficial effect of quinine. The other diseases are distinguishable in their further progress.

The treatment consisted in the application of ice to the spine and administration of narcotics, calomel in large doses, luke-warm and cold baths. The author found abstraction of blood, prolonged baths, and the administration of antipyretics to be useless; the latter disturbing the digestive faculties and lowering the patients. F. WILLIAM ELSNER.

GUSSENBAUER ON CANCEROUS INFECTION OF LYMPHATIC GLANDS.

DR. GUSSENBAUER publishes, in the *Zeitsch. für Heilk.*, vol. ii, Part 1, March 1881, an elaborate memoir (62 pages, with four double and one single coloured plates of microscopic drawings) on the secondary infection of lymphatic glands from primary tumours. His collection of specimens, made during a long period, numbered over 200. Of these, 192 were cases of infection of the lymphatic glands from cancers, chiefly of the skin (including lip) and breast, and of other epithelial regions accessible to the surgeon, while 13 were of cases infected from primary sarcomatous tumours, 9 melanotic and 4 white. The glands, being obtained fresh from the operation, were preserved under the most favourable circumstances. Many small and, to the naked eye, apparently unaffected glands were removed, and their examination has been instructive both for clinical prognosis and for pathology. The paper is divided into a clinical and a histological part.

1. *Clinical Experiences of Cancerous Infection of Lymphatic Glands.*—In those cases where the lymphatic glands belonging to the cancerous region do not appear to be enlarged even on the most minute examination, are they still really intact, or are they probably diseased? There is no fixed standard of size for healthy or for non-cancerous lymphatic glands. They vary in size according to the individual, according to his time of life, his occupation, and the previous occurrence of disease or injury in the part whence the lymph comes to the glands. Working people are apt to have the axillary and inguinal glands of relatively great size, and in the axilla there may be marked differences on the two sides. Very small lymphatic glands often occur, which cannot be detected under the skin until they begin to be infected, and whose presence may not even be suspected. The author describes one such as occurring in the middle line of the neck, over the conoid portion of the crico-thyroid membrane. There is no difficulty in diagnosing infection of lymphatic glands in the usual case of a tumour brought for operation, when it is well grown. But it is different in cases where the primary new growth is seen early. Thus, in six cases of cancer of the breast (five of scirrhous, one of adenoma), where the nodules were very small, no enlargement could be found in the axillary glands. But the latter were removed, and in every case more or less cancerous infection was found in them. Even increased size and induration are not conclusive for the cancerous infection of glands in the axilla in women. Various previous excitations may have led to enlargement and persisting hardness. Only the microscopic test is infallible. The author is convinced that all cases of primary cancer of the breast are followed sooner or later by infected axillary glands. His experience in cases of cancer of the lip

is much more extensive, and altogether conclusive for that region. Cancers of the lip are apt to infect the submaxillary glands much oftener than is usually supposed, and the infection takes place at a particular spot easily found. A triangular space, bounded behind by the facial artery, above by the border and under surface of the jaw, and in front and below by the upper border of the submaxillary gland, is exposed, and the platysma divided at a point about one-third of an inch under the jaw. Through the aperture so made, two, and sometimes three, lymphatic glands may be extracted, of unequal size, and affected in various degrees, the first encountered lying close on the tortuous facial artery, and requiring care in its removal. The author has repeatedly removed from that space lymphatic glands scarcely larger than a hemp seed, and not indurated, but still showing, on microscopic examination, distinct cancerous infection. In 32 cases of cancer of the lower lip operated on from six months to two years after the beginning of the disease, these lymphatic glands were found diseased in all but three. Like the primary disease, that in the glands may be either slow or it may be rapid. In lip cases it is slow. In epithelial cancers of other parts of the face than the lip, infection of the lymphatic glands is exceptional. Out of 48 such cases, secondary lymphatic infection was found in 1 only (cancer of the skin of the forehead infecting on each side superficial facial glands over the parotid). The author further gives his experience of the infection of lymphatic glands of other regions (mouth, larynx, testis, penis, uterus, rectum, skin of the extremities). The important question, how soon the lymphatic glands become infected, must remain unanswered. Only a mere fraction of the cases present themselves for operation within a short time (two or three months) of the beginning of the tumour.

2. *Histological Investigation.*—The extension of cancerous or sarcomatous disease from a primary tumour to the regional lymphatic glands is capable of being explained (1) on the theory of a transport of actual fragments of the primary growth, which multiply in the gland, displacing the proper tissue, and causing it to atrophy; or (2) on the theory that the tissues of the lymphatic gland are transformed by infection into a structure resembling that of the primary tumour. The author points out that the former theory is not based on facts, but is merely an extension to pathology of the doctrine of the continuity of the embryological three layers. His own observations (following an earlier paper in 1872) are entirely in favour of the latter theory. He first inquires into a not unusual appearance that may seem to bear out the transplantation theory, viz., that of linear cords of new growth extending between the tumour and the lymphatic glands. It is true that the lumen of these cords (lymphatic vessels) contains cells other than lymph-cells. But if the epithelium of the vessel be examined, it will be found to be in a state of active proliferation. The cells so produced acquire the characters of the cells of the primary tumour; but the free cells in the lumen want those characters, and are, in fact, young or indifferent cells, which have presumably grown from the epithelium also. The cord-like new growth is, therefore, not due to plugging of the lymphatic vessel by cells detached from the primary tumour, but to proliferation and transformation of the epithelium all along the lymphatic vessel by continuous extension of infection. In this conclusion, as well as in certain other points, the author is mainly in agreement

with Hoggan (*Path. Trans.*, vol. 30). In the lymphatic gland itself, he does not find that the afferent vessels at their points of entrance, nor the peripheral lymph-sinuses, are occupied with transported cells or with the beginnings of the new growth. On the contrary, the first changes are, generally speaking, in the follicular tissue, and not even in the tissue of the cortical follicles specially. A certain kind of corpuscular elements are indeed found in the first stages of the invasion, which have probably been carried by the lymph-stream from the primary tumour. They are very minute spherules, which, in the case of melanotic sarcoma, carry with them the melanotic character of the primary growth. These, he thinks, are of the nature of fertilising germs. They do not themselves grow up into the elements of the new formation, but they infect the constituent elements of the lymphatic gland in such a way, that these latter transform themselves into the likeness of tumour-cells. The doctrine of a *seminium*, he points out, is not new; but no one has hitherto professed to identify the seminal particles. Except in the case of melanotic growths, he has been unable, after much effort, to find among the spherules forms that might be reckoned characteristic of the several patterns of tumour structure. They varied in size and refractive power, but these variations would occur side by side in the same preparation. They are very minute rounded pale granules, colouring very little with reagents, distinguishable from fat-granules, and disseminated all through the tissues of the gland (except the trabeculae), either free or within the protoplasm and even the nuclei of cells. The author's method of proof is to show the stages of transition from the normal elements of the gland towards the perfect form of the tumour-elements. Those stages may sometimes be seen in continuous order in the same section, and especially well in epitheliomatous growths, where, under picro-carmin staining, the cells take up less of the carmine as they approach more to the character of flat epithelial cells, and finally take on only the yellow colouring of epidermis. The most complex transformation of lymphatic gland-tissue described in this paper is into spaces lined by regular rows of columnar epithelial cells, and containing colloid substance, the primary tumour being a cancer of the rectum with that particular structure. The spaces lined with epithelium (representing sections of glandular tubes) are traced back through several stages, and are ultimately identified as the channels of blood-vessels (ramifying in the follicular tissue), whose epithelium and whose muscular and other elements take on active proliferation, and eventually the distinctive form and arrangement of the cells lining a glandular tube. The participation of the various coats of the blood-vessels in the formation of the secondary new growth is a prominent subject of the illustrations accompanying the paper.

LANNELONGUE ON COLD ABSCESSSES AND TUBERCULOSIS OF BONE.

DR. LANNELONGUE writes as follows in the introduction to his recently published volume.* A cold abscess is a tuberculous swelling from the beginning. In the second place, tuberculous affection of the bones is almost always complicated with suppuration. These suppurations are cold abscesses. He then gives his

* *Abcès froids et Tuberculose Osseuse.* Par le Dr. Lannelongue, chirurgien en chef de l'hôpital Trousseau, agrégé de la Faculté de Médecine. Paris, A. Seignin. 1881

reasons for the association of cold abscess with tuberculosis of bone. He shows that tuberculosis of bone owes its true situation in nosology to Nélaton. Tuberculosis of bone was, however, recognised in respect to the vertebral column only; and if tubercles were not found in the lung, the lesion of the vertebræ was at once supposed to be of a different nature.

It is by careful study of the suppurations known under the name of cold abscesses, that the author has been able to refer them to tuberculosis of bones, and to recognise that this tuberculosis may exist in other situations than in the vertebræ. Dr. Lannelongue's book is divided into three parts. The first part treats of cold abscess, properly so called, or tuberculous abscess. For a long time cold abscesses have been distinguished from warm abscesses. The primary tumour of the cold abscess is a tuberculous new formation. In the first stage, the tumour becomes softened and liquefied; in the second, it forms a peripheral membrane, which limits the products of this softening, and which contains tuberculous nodules. Of the two surfaces of this membrane, the internal is frequently unequal, rough, disorganised, and swollen. Its colour is grey or dark red; in cases of congestion, discoloured or yellow. This last shade of colour is due to caseous deposits. All these various aspects are connected with the age of the elements and their modifications. The cavity may be simple or multilocular. The external surface, examined in the living subject before the extirpation or destruction of the cold abscess, is smooth, uniform, and of a greyish colour. In cases when the sac is in process of evolution, continuity with the neighbouring tissues is noted; vascular attachments unite the sac with the adjacent tissues. In a more advanced stage, the sac throws out conoid prolongations into the neighbouring tissues; the periosteum and the aponeuroses appear covered with small threads after the extirpation of the abscess.

The evolution of cold abscess may be traced from the origin, usually in the same patient. Along with the old abscess there are small hard tumours about to become softened. These are the gummata of the St. Louis school, which MM. Brissaud and Josias have recognised as being of tuberculous nature. They are then superficial; there are deeper ones, which escape a superficial examination. These are the true crude tubercles of Laënnec. When the tumour is softened, the abscess is formed. In other cases, these tubercles undergo resolution. Cold abscesses may remain small for a long time, and then increase considerably. The increase is constituted by a true propagation; on the one hand the neighbouring tissues are invaded by a new formation of embryonic tissue; on the other, the original parts of the wall become dissolved and fall into the cavity of the abscess. The contents of the abscesses do not show great resemblance to pus, except on a superficial examination. The pus of cold abscesses is more serous; it contains yellowish white flocculent particles, dark clots, and red blood-corpuscles. Sometimes the contents are oily, transparent (in old abscess) or serous. The liquid contains fewer leucocytes, is richer in granular matter, in fatty bodies, in crystals, in concreted fibrine, and in the remains of cells.

Dr. Lannelongue afterwards describes the symptoms of cold abscess. It is preceded by a small deeply seated or superficial tumour, hidden in the areolar tissue. There may be three, four, ten or

twelve of these small tumours on a single person, in various stages of development. After remaining stationary for a time, the small tumours, which are about the size of a pea, increase, and a diffused glutinous deposit is formed around them, varying in size from a hazel-nut to a walnut. At that time there is fluctuation. When the primary nucleus does not increase, it becomes softened towards the centre, and fluctuates, and tuberculous abscess is formed.

The writer afterwards refers to intermittent cold abscess, due to persistence of the wall, when the fluid is subject to absorption and successive reproduction. Cold abscess may terminate by resolution, absorption of the contents, and disappearance of the sac. When these abscesses have disappeared, the skin shows red or violet spots, depressed or cupped. If resolution of the abscess do not occur, it ulcerates. Ulceration may be either restricted or extensive. When the source of the pus is dried, the sac being destroyed either spontaneously or by a surgical operation, the abscess becomes cicatrised: the cicatrix is depressed, puckered and flattened. As a rule, tuberculous abscesses are cured.

The abscess may become cystic; the tumour ceases to grow, and the liquid becomes more fluid and less viscous; it is transparent. The abscess may be caseous and have solid contents; these caseous masses are stratified, very hard, and originate in the wall itself; there is no fluctuation. The transformation is observed rather in simple tubercular abscess than in abscesses of bone.

The evolution of cold abscess is effected without appreciable reaction. M. Lannelongue has made experiments on the local and the general temperature in subjects attacked by cold abscesses. He has taken every possible precaution, and this is the result. The general temperature is augmented by a few tenths of a degree Cent.; the local temperature is increased by two, three, four, and five tenths of a degree.

With regard to the treatment in cases of ordinary cold abscess, it must be opened as soon as fluctuation is observed, the internal surface must be modified by local applications or injections, and Lister's dressings applied. M. Lannelongue describes an operative proceeding for dissecting and removing the sac of the abscess. He applies Esmarch's bandage, opens the cavity, and removes the wall; he does not endeavour to obtain immediate union, which would be attended by some inconvenience. Sessile cold abscesses of bone are treated in the same way; only in these cases a new factor, the bone, must be taken into account. The bone must be rasped or resected. In abscess by congestion, it is not possible to destroy the wall, and to act upon the bone; but the abscess must be opened so soon as it appears in an accessible surgical region. If it be symptomatic of lesion of a bone or a limb, the treatment employed in sessile abscesses of bone must be used. If the joint be attacked, it is frequently necessary to have recourse to resection; if the abscesses arise from lesion of the vertebræ, of the ribs, or of the sacrum, Lister's dressing must be used. The sac is incised, a drainage-tube is introduced, and a strong carbolised solution is injected. The reaction lasts some days, and a fistulous passage generally remains.

The second part treats of tuberculous abscess appearing in the course of chronic affections of bones. Tubercle is a secondary manifestation of a

constitutional condition: this explains the appearance in a neighbouring or distant organ of multiple products, without apparent anatomical connection with the primary tumour. In spina ventosa, a primary tuberculous affection of the phalanges, there is frequently suppuration in the neighbouring parts. When it proceeds from the bone attacked, the suppuration is symptomatic; at other times the abscesses are independent; these are tuberculous foci, gummata, or large tuberculous abscesses. Inoculation of tuberculous matter is a great argument in favour of this hypothesis; and the multiplication of the abscesses shows the influence of diathesis. M. Lannelongue gives the name of concomitant to those abscesses which become developed during the course of an affection of bone, without having any anatomical relations with the lesion of the bone. Anatomically, these abscesses are constituted like simple tubercular abscess. In addition, tuberculous nodules are found in the concomitant abscess, and in the abscess by congestion. The conclusion is, therefore, arrived at that the bony affection, the cause of the congestive abscess, is primarily tuberculous. Tuberculosis of the lung and brain also often supervenes during the course of the affection of the bone.

In the third part, the author studies tuberculosis of bone. Dr. Lannelongue lays down the principle that the osseous affections having a chronic course with which patients are affected, who present distant concomitant tuberculosis, are originally of the same nature as these abscesses. The lesions only remain for a certain time confined to the tissue of the bone; they spread from it and invade the neighbouring soft parts.

Arthritis supervenes suddenly or slowly, from congestion of the synovial membrane. When arthritis is sudden and acute, it is due to the effusion of pus, of tuberculous matter, or of sequestra into the joint. The encrusting cartilage has then been destroyed. As a general rule, fungous transformation of the articulation takes place slowly, and may for a long time remain partial. When the osseous lesion spreads to the surrounding tissues, there is congestion constituted by vascular fungosities which traverse the periosteum, and become developed on the external surface in the neighbouring tissues. The fungosities may be very extensive, without there being any abscess. They destroy the soft parts as they have destroyed the bone; it is a continuation of the same process; a membrane forms around these external foci, and the abscess is formed.

The presence of isolated or agglomerated tuberculous granulations is the only characteristic of tuberculosis of bone. But these tubercles may, continuing their evolution, disappear, or become transformed so as to mislead in the recognition of the tuberculous affection. Ranvier has shown that tuberculous granulations are frequent in the bones of phthisical patients, especially in the bones with red marrow.

Regarded in an isolated fashion, and with the naked eye, these granulations form a small ovoid spot from half to one millimètre in diameter, translucent, and with an opaque centre. They are either disseminated or agglomerated. The marrow, the periosteum, the bony tissue, and the neighbouring cartilages are the seat of concomitant changes. Rarefying osteitis is present, the bones become ulcerated, cavities containing sequestra are formed, perforations and osseous fistulae occur.

These cavities are tuberculous caverns, and do

not always contain sequestra. Later on, osteoperiostitis occurs, which results in the formation of new bone around the old. This new bone may be more or less thick, and is sometimes scarcely apparent; at other times, the forms of the extremities of the bone are sensibly modified. The consequences of these anatomical changes are easily understood. The relations of the bone to the neighbouring bones are changed; the physiological play of the joint is disturbed, and the body assumes vicious positions. The changes of form in the flat bones are more limited and less visible.

GASKELL ON THE RHYTHM OF THE HEART OF THE FROG AND ON THE NATURE OF THE ACTION OF THE VAGUS NERVES.

THIS paper (*Proc. Royal Soc.*, Dec. 1881) is divided into two parts: Part I, on the rhythm of the heart; Part II, on the action of the vagus nerve.

The conclusions arrived at in Part I are summed up in the following propositions. 1. The rhythm of the heart is caused by discrete motor impulses, passing to the muscular tissue from certain motor ganglia. 2. In order that each one of these impulses may produce a contraction of the ventricle, a relation must exist between the strength of the impulse and the excitability of the ventricular muscle. 3. When each impulse is inefficient to cause a contraction of the ventricle, the ventricular muscle has the power of summing up the effects of two or more of these inefficient impulses, and so continues to beat rhythmically, though no longer synchronously with every impulse. 4. The most satisfactory explanation of this summation process is as follows. Every impulse which is inefficient to produce a muscular contraction increases the excitability of the muscle, and, therefore, makes it easier for a second impulse to cause a contraction. 5. The impulses can be made inefficient to produce contractions synchronous with them by lowering sufficiently the excitability of the ventricle, as is seen in the action of poisons, even although the rate and strength of the impulses remain unaltered. 6. The impulses can also be made inefficient when the excitability of the muscle is unchanged by diminishing the strength of the impulses, as is seen in the effects of compressing the tissue between the ventricle and the motor ganglia, or of heating the auricles and sinus without heating the ventricle. 7. There is a limit to the extent to which a series of inefficient impulses can raise the excitability of the muscle, so that the ventricle can remain absolutely quiescent, even although the impulses still pass to it, when those impulses are sufficiently weakened.

In Part II, it is shown that stimulation of the vagus produces a marked effect upon the force of contractions, both of auricle and ventricle, independent of any alteration of rhythm. The author classifies the vagus heart-curves under the three following types, between which every conceivable variation can occur. 1. Complete quiescence of both ventricle and auricles, followed by contractions, which at first are scarcely visible, but which rapidly increase in size, until at the maximum they are much greater than before the stimulation of the nerve. From this maximum they very gradually decrease, until the original size of contraction is again reached. 2. During the stimulation, no quiescence of either

ventricles or auricle, but simply a diminution of the contractions, followed by a rapid and marked augmentation of the contractions beyond the original height, and then a slow gradual diminution to the size obtaining before the nerve was stimulated. 3. No primary diminution, but from the commencement of the stimulation the beats increase in size, and, after a time, gradually return to the original size. The author concludes that the effects of the vagus depend on the trophic condition of the heart, and that stimulation of the vagus may, according to that condition, have either of two opposite effects on the muscular tissue: 1. Diminishing its excitability and lowering its tonicity, when it reduces the force of ventricular contraction; 2. Increasing its excitability and possibly its tonicity, when it increases the contraction force. He suggests that formative processes are going on in the muscular tissue and in the motor ganglia of the heart, and that the vagus produces all its effects by increasing the activity of these processes.

A. WALLER, M.D.

IRYZ ON THE 'SPOTTED SICKNESS' OF CENTRAL AMERICA.

In an interesting memoir lately presented to the Academy of Medicine of Mexico, Dr. Iryz calls attention to a hitherto undescribed and very remarkable malady which would appear to be endemic in certain regions of Mexico and Central America. The author speaks of it in the vernacular as the 'spotted' or 'painted' sickness, the *Mal de Pinto* or *Tina*. In the absence of a more scientific nomenclature, these names may perhaps be accepted at least provisionally. The malady in question has not as yet been described in any of the standard works on medicine. In Littré and Robin's edition of Nysten's *Dictionary*, there is possibly a vague reference to it under the name of *carate*; but the authors, even if they intended to describe this affection, evidently knew nothing about it. Remarkable as it is, when seen for the first time, it nevertheless escaped the notice of such a keen observer as Baron Humboldt, who, in his *Account of New Spain*, makes no mention of having met with any disease at all similar in character to *mal de pinto*, as described by Dr. Iryz. This, however, is easily explained by the fact that the disease begins most insidiously, escaping for a considerable time the notice of even the sufferer himself. In its less severe forms it may also be readily mistaken for certain skin-diseases, which have nothing peculiarly striking about them.

The genuine 'spotted sickness' is probably not met with anywhere out of Central America and Southern Mexico. The earliest symptom connected with it is the appearance of a patch of discoloration on any portion of the general integument. This is accompanied by slight desquamation of the skin of the part affected, and by a good deal of irritation and itchiness. From this first centre, so to speak, it may radiate in all directions, though as a rule it follows that in which the desquamation extends. Sometimes the eruption is discrete, sometimes confluent, and as a rule unsymmetrical. The affection is accompanied by a peculiar and characteristic odour, which has been compared to that of mouldy garments. The general health is little affected by the presence of the malady, nor is it accompanied at any stage by constitutional disturbance. Sleep, however, is sometimes interfered with by the itching, which is always worse at night.

The affection appears under four distinct varieties, viz., the black, the blue, the red, and the white. In the former two the pathological process is apparently situated superficially to the dermis, in the latter two the dermis and rete mucosum are involved. Hence, from its anatomical characters, a general grouping of all cases may be made into epidermic and sub-epidermic. In the former, the eruption appears indiscriminately on all parts of the body, such as the scalp, eyelids, neck, trunk, and limbs, but never on the soles of the hands or feet. The patches of colour, which are black or dull blue, are, as a rule, circumscribed, and slightly elevated above the surrounding healthy skin. At first the affected surfaces are rough and dry, but at a later stage they become moist and gummy. There are no signs of inflammatory action, and pressure causes neither pain nor change of colour. When the process of desquamation has reached its extreme limits, the epidermis often appears as if divided into squares of different colours, like a mosaic pavement. The affection may be limited to various patches of discoloration, or may extend over the whole body in an uniform manner. In this latter case the patches are generally black, and give to the patient the appearance of a negro with an Indian or Caucasian type of face. Later on, tubercles of the size of a small nut may be developed on the integument.

In the blue variety, the colour is very similar to that caused by grains of gunpowder under the skin. It may be associated with black patches, and also later on with other discolorations. No portion of skin is, however, attacked by two consecutive discolorations. The eruption in each case confines itself to hitherto healthy integument.

The subepidermic (white, red, or coloured) variety appears under the form of patches of a pale white colour, like cicatricial tissue, or a rose or dark red. In the case of the white they are generally bordered by a dark ring, as if the colour had passed from the centre to the circumference. When touched, these patches convey a different sensation from the neighbouring healthy skin, being generally rough and dry. The affected skin is hard and apparently condensed, and has lost in great part sensation, while its capillaries also appear to have undergone diminution. Itching is a constant phenomenon, but desquamation is less abundant than in the black or blue varieties. The patches spread from the centres towards the periphery, sometimes slowly, but generally with considerable rapidity. They are, as a rule, uniform in colour, but occasionally present islets of pigment in their interior, as if this material had in some places resisted destruction. The affection may spread either from one patch or from several centres distinct in colour, which subsequently, becoming more or less confluent, impart to the whole body, or to a limb, a variety of tints. The author mentions one case in which both legs were thus attacked. When compared together, they seemed to belong to two different individuals. The white or leucodermatous variety may, like the black, invade various portions of the limbs and trunk, but it has a distinct predilection for the neighbourhood of the joints. All these varieties of colour may be occasionally found united in the same individual. They impart to his features a strange and peculiarly repugnant aspect, which, in conjunction with the specific and disagreeable odour of the disease, sufficiently accounts for the disgust and dread it excites in those communities in which it is endemic.

The *mal de pinto* may commence in a portion of

integument which has hitherto been perfectly sound; it more usually, however, follows some general eruption such as erythema, herpes, or eczema. Its course is essentially chronic. Sometimes one patch will remain without spreading for months, or even years. This is frequently observed to be the case with the white and coloured varieties. The black and blue forms, on the contrary, tend to spread much more quickly and extensively. They comparatively seldom, however, actually cover the whole body, there being, as a rule, some portions of healthy skin left amid the general destruction. One case, however, the author describes, in which complete *albinism* had been produced. The head, neck, thorax, and limbs, and even the hair, were as white as if they had been powdered over with flour. The disease is contagious, but never congenital. If treatment be withheld, it will continue during a lifetime. Sometimes, but not till it has apparently run its course, it loses its contagious properties, and although the skin remains permanently altered, desquamation and itching ceases.

The diagnosis is easy or the reverse, according to the appearance which the skin presents. When the affection has become generalised over the whole body, and when patches of two or three different colours are present, there can be no difficulty in recognising it. It is sufficient to see such a case to at once name it. No other known skin-disease gives a similarly characteristic appearance. The whole integument of the body is covered with black or blue patches, interspersed with others of a dirty white, more marked on one side than on the other. With this pigmentation there also exist furfuraceous desquamation, a specific and characteristic odour, and a peculiar roughness to the touch, all which are present in well marked cases.

When, however, a case is seen in its earliest stage, the characteristic play of colours is absent, and then the diagnosis becomes more difficult. The patches in the 'black form' may simulate Addison's disease. They are, however, darker and better defined than is usually the case in the latter affection. They are, moreover, rough to the touch, and accompanied with pruritus and desquamation, while all constitutional symptoms are absent. From ordinary chloasma, *mal de pinto* may be distinguished by the possession of the above features, and also by its tendency to progress. From pityriasis nigra it may be diagnosed by its deeper and more uniform tint, and also by the presence of tubercles more or less well developed. The 'blue' variety might possibly be mistaken for gunpowder-marks under the skin, but the history of the case will at once remove this source of error.

The 'white' form of the disease, especially at its earliest stage, is sometimes difficult to distinguish from vitiligo. Both affections show equally dull or brilliant white patches, more or less circular, level with the neighbouring skin, and encircled by a line of desquamation. In the *mal de pinto*, however, the pallor is, as a rule, much more marked than in vitiligo. Neither heat nor cold, blisters, cauterisation, or bruising, can in the former alter even momentarily the peculiar whiteness of the skin, in which the capillaries have apparently been completely destroyed.

The distinctive characteristics of the *mal de pinto* may be stated generally to be abnormal pigmentation, itching, and desquamation, a characteristic odour, a peculiar sensation on touch, and in the

white or coloured forms a certain brilliancy of aspect.

The disease is not dangerous to life, and in fact causes little disturbance of any kind. It is, however, very fatal to personal beauty, inasmuch as the pigmentation of the skin is generally permanent. If left to itself, the *mal de pinto* will generally invade the whole body, though it may sometimes stop short of this, and apparently undergo spontaneous cure. With appropriate treatment, all forms of the disease are curable, except the 'white,' especially in its later stages. Treatment consists, in the main, attention to hygienic requirements, and the administration of large doses of arsenic.

LITTON FORBES.

GRANCHER ON THE PROGNOSTIC IMPORTANCE OF TYMPANIC RESONANCE OF THE INFRACLAVICULAR REGION IN PLEURITIC EFFUSION.

M. GRANCHER (*Gaz. Méd.*, 1882, Nos. 3 and 4) has set himself the task of determining the prognostic importance of this sign. Without regarding the difference of intensity or tone of the tympanitic note, he only lays stress upon the other physical signs which may be found by auscultation and palpation to accompany it.

Three conditions are possible. 1. The tympanitic resonance may be accompanied by harsher breathing and increased tactile vibration; 2, by increased tactile vibration and diminished respiration; and 3, by diminution of both respiration and tactile vibration. Each of these conditions represents a special physical state of the lung, upon which, again, the subsequent course of the pleurisy very frequently depends. In the first of these conditions, that of increased respiratory murmur and fremitus, it is assumed that the lung-tissue is intact, and, although compressed, plays only a passive part in the pleuritic process. In such a case, the most favourable prognosis may be given. Of five cases observed, three, with pleuritic effusion, recovered completely; and two—pneumonic and cardiac with hydrothorax, respectively—ended fatally. To this combination of symptoms he gives the name of 'supplementary tympanism', and states further that every increase in the respiratory murmur is, in such cases, accompanied by a corresponding increase of the tactile vibration and of the tympanitic resonance.

The second combination—increased tactile vibration with diminished respiratory murmur and the tympanitic percussion note—is the most frequent, and occurs in cases of tubercle which appear masked by pleuritic effusion. This he calls 'congestive tympanism'.

The third combination—tympanitic resonance with diminished respiratory murmur and fremitus—occurs when the root of the lung or the bronchi of the upper lobe are compressed and also in hydrothorax and œdema of the lung. A case of mediastinitis successfully diagnosed by this means, is recorded. This variety is entitled 'tympanism of compression'.

To sum up, therefore, the results of M. Grancher's paper, it would appear that, by means of his combined symptoms, we have, especially in cases of pleuritic effusion, a method of determining the healthy or unhealthy condition of the upper lobe of the lung, in the presence of tympanitic resonance of the infraclavicular region.

E. CLIFFORD BEALE, M.B.

SCHEDE, KÜSTER, AND MUNDY ON
POISONING BY IODOFORM.

IN response to Professor König's appeal to his colleagues, that they should publish the results of their experience with iodoform, Schede of Hamburg, in the *Centralb. für Chir.*, No. 3, 1882, relates some of the ill effects he has observed following the use of iodoform in the Hamburg Hospital, and also points out some contra-indications to its external application (*Deutsche Med. Zeit.*, Feb. 2, 1882). He gives, however, no exact account of the quantity used in dressing large and small wounds, so that his results do not in any way contradict those of many conscientious observers who have not seen these bad effects following cautious administration. He says that there are persons who possess a peculiar idiosyncrasy towards iodoform, which is not to be found out until, without any warning, it suddenly appears in the most severe symptoms of poisoning, and may lead to the rapid death of the patient, even though the administration be immediately suspended. These symptoms he divides into six groups. 1. There may be elevation of temperature to 104 Fahr., and more, without other phenomena (so-called 'aseptic fever'). 2. In addition to fever, there may be depression of spirits, headache, loss of appetite, taste of iodoform in the mouth, the pulse being often very rapid, while at the same time it is small and compressible. On stopping the drug, these symptoms at once disappear. 3. The pulse-rate may be increased to 150 or 180, and more. In spite of rapid cardiac action and small pulse, with anxiety, etc., amelioration may take place in this condition on stopping the drug; but there is, nevertheless, great danger. This condition may arise after the first application of an iodoform dressing, or it may only set in after toleration has been established for weeks. 4. The alarming rapidity of the pulse is accompanied by high fever, yet the sensibility is not diminished, and no symptoms of septicæmia arise, but the suspension of administration is not followed by reaction, and death follows. 5. After severe operations, although the pulse is very good, rapid collapse sets in, ending in death. It is, however, a question whether this is solely due to the iodoform. 6. The most alarming and, by the relative frequency of their occurrence, as well as suddenness, most dangerous forms of poisoning, are the disturbances of the cerebral functions, which either take the form of acute meningitis, or of a psychological disease (melancholia, etc.), and lead to a fatal termination, even though no elevation of temperature of a particular kind take place, and the application of the drug has been immediately suspended. Schede says that large fresh wounds should not be filled with iodoform, as it becomes impacted in the open tissue-spaces, so that it can only be removed with the spontaneous separation of the scab. Even smaller wounds do not offer security against absorption, although there is less danger in granulating surfaces. Dressing with the iodoform-gauze, as well as the use of the gelatine points, in uterine diseases, he declares to be more safe; but there is no protection against erysipelas in iodoform.

Küster, in a recent paper (*Berl. Klin. Woch.*, No. 14, 1882), lauds the application of iodoform in powder to open wounds, but relates several cases of fatal intoxication, in which the symptoms were much the same as those described by Schede, viz., 1. disturbances of the digestive tract; 2. fever; 3. a

peculiar influence on the central nervous system, characterised by depression, melancholia, dilatation of the pupils, apathy, uncleanliness (involuntary motions and urination), hallucinations, etc.; 4. rapid collapse and death. He also comes to the conclusion that it offers no protection against erysipelas; and he has found it to act as a foreign body, and to produce a peculiar phlegmon, in spite of which the wound preserves its thoroughly aseptic character. Independently of these drawbacks, he has, however, obtained astonishing successes with iodoform in checking decomposition, and in the treatment of tubercular diseases, against which carbolic acid was powerless; and he is of the decided opinion that resections are now much more successful in his clinic than formerly. Under these circumstances, great caution is necessary, however, and an indiscriminate use of this antiseptic is to be strenuously deprecated.

In the same number of the *Berl. Klin. Woch.*, Dr. J. H. Mundy of Vienna most energetically advocates the use of iodoform as a first dressing on the battle-field, it being, in his opinion, the safest and most reliable, as the application of Listerian dressing is impossible, and he has not seen it successful in his extended experience of military surgery. It requires no water to make solutions, nor clean vessels, and, if supplied to surgeons and assistants in suitable cases for carrying about the person, can be immediately applied in the first and second lines, where vessels and water are scarce, and there is no time for circumstantial dressing. He believes that the fatal cases were the result of putting too much iodoform into the wound (80 to 300 grammes at once!), and points out that many of the patients who died were anæmic, either very young or very old, subjects of old-standing suppuration, etc., and that on minutely examining the cases of Mikulicz, Schede, König, Hoeftmann, and Czerny, it is found that many of the patients suffered from organic disturbances, only revealed *post mortem*, and which may have been the cause of death just as much as the iodoform. In others, the account of the *post mortem* examination is either not given, or only so vaguely as to leave it impossible to draw any conclusion therefrom. In applying the dressing, Mundy recommends that only a small quantity of the powder be dusted into the wound, that it be only removed when absolutely necessary, and that tight sutures and bandages be not applied, as it is by these and by the constant removal of the dressing to uselessly wash and reapply iodoform that its rapid absorption is promoted. He believes that in iodoform we have now obtained the only possible antiseptic dressing for the first lines, hitherto out of the question. That it is necessary to exercise great caution in using a drug containing 96 per cent. of nascent iodine is, in his opinion, a matter of course; but do not carbolic acid and salicylic acid—in fact, nearly every antiseptic or drug—induce evil effects when recklessly applied or administered? Lastly, he advises that every military surgeon should be supplied with a belt and leather box, in which to carry a supply of iodoform in perforated tins, so that an immediate and handy means of applying antiseptic dressing could be in his power, wherever situated.

F. WILLIAM ELSNER.

CROTHERS ON THE TRANCE STATE OF INEBRIETY: ITS MEDICO-LEGAL RELATIONS.

DR. T. D. CROTHERS, superintendent of an institution for the special treatment of inebriates and opium cases, at Hartford, Connecticut, has recently read before the New York Medico-Legal Society, an important paper on 'The Trance State of Inebriety: its Medico-Legal Relations', to which Dr. Geo. M. Beard, of New York City, has prefixed an introduction on the nature and character of the trance state. By inebriety is meant what in this country passes under the name of dipsomania; and not alcoholism, *i.e.*, such cases as come directly from the toxic action of alcohol.

The state described is one of inebriate automatism, analogous to epileptic automatism, inebriate insanity, or inebriate unconsciousness. Dipsomania or inebriety is described as a nervous disease, frequently causing automatic acts, during which the subjects are more or less irresponsible, and they may commit crimes for which, in the authors' opinion, they ought not to be punished any more than the irresponsible insane of other classes. Although the suspicion might arise that these are cases of masked epilepsy, or epilepsy without convulsions, these patients are held to be not epileptic in any sense of the term. They are insane during the attacks, and the insanity is of a special and peculiar form. There are no physical signs of general paresis in the pupils, in the walk, or in the speech, or in the intellectual or moral phenomena exhibited by them, or in their subsequent history. Other drugs besides alcohol, it is said, will produce these effects; the bromides, for example, and possibly, in some cases, chloral-hydrate and opium. The fact, if a fact, that inebriety is a nervous disease, causing phenomena of the above kind, is important both in a scientific and in a medico-legal sense, and is claimed as a new and original discovery in medical science.

Dr. Crothers thinks that the persons were unconscious, during the trance, of what they did; but Dr. Beard holds a different opinion, thinking that they knew what they were about, to a greater or less degree; and this seems the more probable view. He draws, indeed, a distinction between consciousness and rememberable consciousness, and holds that there is a plane of consciousness below which it is unrememberable, and above which it is more or less rememberable. He illustrates this by *anæsthesia*. Patients, even when perfectly *anæsthetised*, cry out under severe operations, and we say that they do not feel the pain; although they probably do feel it dimly, transiently, at the time. Dr. Beard also contends that, for climatic and other reasons, there is much more of the nervous disease inebriety inherited and acquired in America, than in any other country, although there is less drinking among the better classes there than in any European country. He is of opinion that there is as much evidence of the existence of the functional nervous disease inebriety, characterised (1) by its irresistibility; (2) by its hereditary character and association with other nervous diseases; (3) by the suddenness of the attacks; and (4) by its periodicity—as there is of general paresis, or dementia, or melancholia, or marked epilepsy, or neurasthenia, or acute mania, or hysteria, or chorea, or locomotor ataxy.

Dr. Crothers details the cases of several persons who have come under his notice, and sums up his

paper in the following propositions. 1. Inebriety must be recognised as a condition of legal irresponsibility, to a certain extent depending on the character and circumstances of the case, and the general mental integrity displayed. 2. All unusual acts or crime committed by inebriates, either in a state of partial coma or of alleged amnesia, which come under legal recognition, should receive thorough study by competent physicians before the legal responsibility can be determined. 3. When the trance state is established beyond doubt, the person is both legally and practically irresponsible for his acts during this period; and each case should be measured by the facts of its individual history. 4. Inebriety is a disease requiring physical means in the treatment. Society demands of the patient that he use diligence to recover, and so far as he may neglect this, both himself and community are responsible. 5. It is the duty of the State to provide asylums and encourage private enterprise to furnish the means and appliances for restoration. 6. Lastly, standing on this border-land, and looking back at the injustice and legal crime that is daily committed in the punishment of inebriates, who are practically insane, Dr. Crothers is convinced that the time has come for a revolution of sentiment and practice, in which both the inebriate and the community must be held responsible, not alone for his acts, or the consequences of them, but the causes and conditions which have developed in this way; then the victim will be forced to avail himself of every means for prevention, restoration, and recovery.

THOS. STEVENSON, M.D.

NEALE ON BEEF-TEA, LIEBIG'S EXTRACT, EXTRACTUM CARNIS, AND URINE.

DR. R. NEALE writes on this subject in the *Practitioner* as follows. In the *Lancet*, October, 1880, p. 562, Mr. G. F. Masterman draws attention to the chemical analysis of beef-tea, and shows that it is analogous to urine, excepting that it contains less urea and uric acid. Some years ago Mr. Masterman also gave analyses in one of the medical journals, but which of them I cannot learn, even from the author himself, showing that beef-tea, most carefully prepared, does not contain, including alkaline salts, more than from 1.50 to 2.25 per cent. of solid matters, and that such matter is mainly composed of urea, kreatine, kreatinine, isoline, and decomposed hæmatine, exactly the animal constituents of the urine, except that there is but a trace of urea. Many writers have endeavoured to impress the public and the profession with the true value of beef-tea, *viz.*, that it is not a nutrient but a stimulant, and that it mainly contains excrementitious materials. It appears, however, of little avail, for one constantly meets with those, even in the ranks of the profession, who believe beef-tea to be really a powerful nutriment, while in most cases, among the public, the positive statement that in milk we possess a far cheaper and more powerful blood and flesh-making food than in beef-tea, is met with a sceptical stare. A short time since a consulting physician wrote in one of our periodicals, how he was not unfrequently called to cases where he found the patient literally starving to death in the midst of plenty. Wines and liqueurs of all choice brands covered the table, with beef-tea, jellies, and essence

of meats, in all their endless varieties, some of which, the consultant was told, were given every half hour, and therefore the patient had been well kept up. By a speedy clearance of all but the brandy bottle, and with the addition of two or three pennyworth of milk, he had, on several occasions, rescued a young and valuable life from certain death. The late Dr. Francis Sibson, in an admirable paper on Bright's disease and its treatment, published in the *British Medical Journal*, February 1877, p. 155, showed how detrimental beef-tea may prove in some cases of Bright's disease, where the kidneys are already taxed to the utmost to throw off metamorphosed structures; and yet the metamorphosed structures of the muscles of the cow are superadded, for these very materials, had the animal lived, would have been passed away as urine. Frequently, too, beef-tea is advised by practical physicians in diarrhœa, dysentery, and during the diarrhœa of typhoid fever; certainly a large experience of tropical dysentery and diarrhœa has taught the writer to look upon this fluid in the light of poison in such cases. Dr. Lauder Brunton has some very able remarks upon the occasional injurious results of beef-tea (*Practitioner*, November 1880, p. 325): 'We find only too frequently that both doctors and patients think that the strength is sure to be kept up if a sufficient quantity of beef-tea can only be got down; but this observation, I think, raises the question, whether beef-tea may not very frequently be actually injurious, and whether the products of muscular waste, which constitute the chief portion of beef-tea or beef-essence, may not under certain circumstances be actually poisonous. For, although there can be no doubt that beef-tea is in many cases a most useful stimulant, one which we find very hard indeed to do without, and which could hardly be replaced by any other, yet sometimes the administration of beef-tea, like that of alcoholic stimulants, may be overdone, and the patient weakened instead of strengthened.' Many other writers, who have from time to time endeavoured to impress the profession with the true value that beef-tea possesses as a stimulant, but not as a nutritive agent, may be referred to by the aid of the *Medical Digest*, Sections 124 and 125.

The non-nutritive, but valuable stimulating, powers of beef-tea, and its excellence as a vehicle for flesh-making food, such as bread, being fully conceded, it will be interesting to note some facts proving that similar properties have long been known as pertaining to urine. In South America, urine is a common vehicle for medicine, and the urine of little boys is spoken highly of as a stimulant in malignant small-pox. Among the Chinese and Malays of Batavia, urine is very freely used. One of the worst cases of epistaxis ceased after a pint of fresh urine was drunk, although it had, for thirty-six hours or more, resisted every form of European medicine. This was by no means an unusual result of the use of urine, as I was informed by many of the natives. Hypodermic injections of ergot were then unknown. As a stimulant and general 'pick-up,' I have frequently seen a glass of a child's or young girl's urine tossed off with great gusto and apparent benefit. In some parts of our own country the use of urine, as a medicinal agent, is not unknown. The use of urate of ammonia and guano was noticed by Bauer in 1852, who found their external use of value in phthisis, lepra, morphœa, and other obstinate skin diseases. Dr. Hastings' report of the value of the excreta of reptiles in 1862 in the treatment of

phthisis, will also be fresh in the recollection of the older members of the profession. Possibly other observers may be able to add further to our information regarding the medicinal uses of urine both at home and abroad.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. ARMINGUE.—A New Vesicant. (*La Independencia Med.*, Feb. 1, 1881.)
2. LECAILLE.—A New Method of Treating Yellow Fever. (*La Independencia Med.*, Jan. 22, 1882.)
3. DENKER.—The Treatment of Diphtheria. (*Vracheb. Vedom.*, No. 3, 1882.)
4. LESENEVICH, B.—Treatment of Whooping-Cough by Belladonna. (*Vracheb. Vedom.*, 1882, No. 4, pp. 2950, 2951.)
5. VECHTOMOFF.—Quinine in the Treatment of Small-Pox. (*Vracheb. Vedom.*, No. 10, 1882.)
6. COOK, E. A.—The Treatment of Diabetes. (*Practitioner*, April 1882, p. 247.)
7. PACK.—Linimentum Crotonis in Acute Bronchitis. (*Practitioner*, March 1882, p. 170.)
8. SOULÉ.—Treatment of Sea-Sickness. (*New York Med. Rec.*)
9. PAUL.—Saccharate of Calcium in Burns. (*La Ruche Pharm.*, Jan. 1882.)
10. ZEISSL.—Iodide of Lithium. (*Pharm. Centralbl. and Pharm. Jour.*)
11. PAYNARDEAU AND TAYAC.—The Use of Pilocarpine in Diphtheria. (*Jour. de Thérap.*, April 10.)
12. ARCHAMBAULT.—The Treatment of Diphtheritic Paralysis. (*Gaz. des Hôp.*)
13. OLLIVE.—Discutient Action of Alcohol employed as a Topical Application in Inflammation. (*France Méd.*)
14. FOSTER.—Iodoform in Gynæcological Practice. (*New York Med. Jour.*)
15. WIEGAND.—On Wine of White Ash Bark. (*Amer. Jour. of Pharm.*)
16. Medicinal Uses of Peroxide of Hydrogen. (*Pharm. Jour. and Trans.*, March 11.)
17. NEUSS.—Preparations of Iron for Subcutaneous Injections. (*Zeitschr. für Klin. Med.*, Band iii.)
18. DESCAMPS.—The Treatment of Pleuritic Effusions by Respiratory Gymnastics. (*Riview de Thérap.*, April 1, 1882.)
19. SCHWARZ.—The Transfusion of Alkaline Solution of Common Salt in Acute Anæmia.
20. CERVELLO.—On Adonidin. (*Archiv für Exper. Pathol. and Pharm.*, Band xv.)
21. VULPIAN.—Salicylate of Bismuth in Typhoid Fever. (*Jour. de Pharm.*, Band xv.)
22. SCHWARZ.—Transfusion of Alkaline Solution of Common Salt in Acute Anæmia.

1. Armengue on a New Vesicant.—Dr. José Armengue of Barcelona (*La Independencia Medica*, Feb. 1, 1882) has recently experimented with a new vesicating material derived from the *Enas Afer*, a coleopterous insect, found in large quantities in certain districts of Spain. The experiments were carried out by Dr. Armengue on his own person and on several medical students. The results obtained lead to the conclusion that, in the *Enas Afer*, a very much more safe, cheap, and readily available means of producing vesication exists than in the old-fashioned cantharides. The advantages claimed for the new material are—that it acts quickly, and with scarcely any appreciable pain; that the limits of vesication extend beyond the mere seat of the blister; and that from the experiments, so far as they have

been carried out, it appears to have no physiological action on the genito-urinary system. This latter fact alone, if subsequently established, will at once stamp the *Enas Afer* as a valuable addition to the materia medica.

2. *Lecaille on a New Method of Treatment of Yellow Fever*.—Dr. Lecaille has recently (*La Independencia Med.*, Jan. 22, 1882) called attention to the favourable results which he has obtained in twelve cases of yellow fever from the use of carbolic acid administered internally and hypodermically. He was led to try this remedy inductively, believing that yellow fever is essentially a zymotic disease. In one case which he records, the dreaded and generally fatal symptom of black vomit had already appeared. He injected subcutaneously 100 minims of a 5 per cent. solution, and administered a julep composed of carbolic acid and carbolate of ammonia, supplemented by enemata of sulpho-carbolate, at intervals of two hours. This treatment is generally successful within three days, but may be continued to the seventh.

LITTON FORBES.

3. *Denker on the Treatment of Diphtheria*.—Dr. Denker (*Vracheb. Vedom.*, 1882, No. 3), who, during his twenty-four years' practice in the large Nicolaevsky Children's Hospital in St. Petersburg, treated above two thousand diphtheritic cases, and tried all possible external and internal remedies recommended for this grave affection, obtained the best results from the following method, which he has practised ten years. As soon as white spots appeared on the tonsils, the author administered the *agua laxativa Viennensis* (compound infusion of senna), in doses of six ounces to an adult man, of five ounces to an adult woman, three ounces to a child eight years old, two ounces to a child three years old, and a teaspoonful to a infant twelve months old. The dose was divided into three parts; one-half was taken at once, a quarter of the dose an hour later, and still later the remaining quarter of the medicine. Abundant liquid stools followed. When the purgation stopped, the author ordered a cooling draught, containing some hydrochloric acid, and, every two hours, a gargle, consisting of equal parts of lime-water and hot milk, the same mixture being used for cleansing (by means of a pencil), the throat and nasal cavity. Dr. Denker alleges that, when early begun, such treatment generally led to a rapid recovery of patients.

4. *Lesenevich on the Treatment of Whooping Cough by Belladonna*.—Dr. Lesenevich (*Vracheb. Vedom.*, 1882, No. 4), states that he obtained the best results from powdered belladonna root, administered in doses of one-thirtieth, one-twenty-fourth, and one-twelfth of a grain, three or four times daily. A very rapid diminution of the number, the duration, and the intensity of paroxysms followed. The duration of the spasmodic stage of the affection was cut short, the shortening being equal to some weeks (comparatively with cases of pertussis, treated by other remedies.) [Not less favourable results from the belladonna treatment of whooping-cough were obtained by Drs. Wigglesworth and R. Neale (*LONDON MEDICAL RECORD*, June, 1879, p. 222), and Professor Heubner (*Ibid.*, November, 1881, p. 458), as well as by very numerous other observers in England, United States, France and Germany.—*Rep.*]

5. *Vechtomoff on Quinine in Small-Pox*.—Dr. Vechtomoff (*Vracheb. Vedom.*, No. 10, 1882), following Dr. Stierner's recommendation, administered to seven patients with small-pox (in the initial stage),

quinine in doses of 12 to 120 centigrammes, and reports on the results of this plan as follows. 1. All the patients treated by quinine presented relatively slight eruption, while almost all other patients, intentionally left without quinine, were covered with confluent pustules. 2. All the patients treated by quinine recovered, while the mortality in all the other cases during the epidemic given was as high as 20 to 30 per cent. 3. All the cases treated with quinine were quite free from any complications, while almost all those treated otherwise were gravely complicated. 4. In the quinine cases the suppurative fever was slight, or was absent altogether. The author recommends a fair trial of this simple plan of treatment.

V. IDELSON, M.D.

6. *Cook on the Treatment of Diabetes*.—Dr. Edmund A. Cook, in the *Practitioner*, April 1882, p. 247, makes some excellent remarks on the treatment of diabetes mellitus. The marked diminished action of all the secreting organs of the body, excepting the kidney, deserves attention. Diminution of urine is not a mark of improvement, but rather the reverse, because then the sugar is not excreted. The imbibition of large quantities of water destroys the action of the gastric glands, and so the patient is badly nourished. Opiates, Dr. Cook thinks, are bad, although they certainly produce temporary improvement. To relieve the thirst and hard dry tongue, pilocarpine in doses of one-twentieth of a grain every four hours is very useful. Constipation is a marked symptom, and often attends the cases of sudden death frequently met with in diabetic subjects. Enemata are most useful to correct this symptom. Pepsine and hydrochloric acid with all the meals assist very materially the digestive powers, and fluids should not be taken just previous to meals. Much phosphates pass by the urine; and, to replace this loss, the administration of phosphates is most desirable. The paper is very suggestive, and Dr. Cook believes that the line of treatment advocated will rarely fail to cause improvement in diabetic cases.

7. *Park on the Use of Linimentum Crotonis in Acute Bronchitis*.—Dr. R. Park, in the *Practitioner*, March 1882, p. 170, details the advantages he has derived from free applications of this liniment in cases of acute bronchitis. Dr. Park uses it in infancy, as well as in advanced years.

R. NEALE, M.D.

8. *Soulé on the Treatment of Sea-Sickness*.—Dr. Milan Soulé, surgeon on the steamship *City of Sydney*, has written (*New York Med. Record*) an account of his experience with the treatment of sea-sickness with bromides, as laid down by Dr. G. M. Beard. About three years ago, he began to use the bromides, following, as nearly as possible, the direction given by Dr. Beard. During nearly four years passed in the service of the Pacific Mail Steamship Company, he had tried nearly every drug or combination of drugs that had ever been proposed, but without success. He found that the bromides enabled him to entirely prevent or greatly to alleviate the disease, and he has not one failure to record. The following is the combination he most frequently employed, viz., R. Sodii bromidi, ʒ iv; Ammonii bromidi, ʒ ij; Aquæ menthæ piperitæ, ʒ iij. M.S.—A teaspoonful before meals and at bed-time; begin treatment three days before going on board. When preparatory treatment has been neglected and the disease is fully established, he puts a teaspoonful of the above in a half-tumbler of water, adds a drop of fluid extract of ipecacuanha, and gives a teaspoonful every five

minutes. It generally relieves the patient in less than an hour. Next to the bromides, he has found hyoscyamia the most successful remedy. Atropia frequently affords relief, but is not altogether safe, as retention of urine sometimes follows its use. Nitrite of amyl has failed in Dr. Soulé's hands. In several cases, the bromides entirely prevented seasickness during voyages of from twenty to thirty days, although these patients were always sick on previous voyages.

9. *Paul on Saccharate of Calcium in Burns.*—Instead of the ordinary mixture of oil and quicklime, Dr. C. Paul (*La Ruche Pharm.*, Jan. 1882) prepares a liniment made of saccharate of calcium in the following manner. Equal parts of sugar and slacked lime are triturated together. Water is then added gradually by slow degrees, so as to render the mixture perfectly liquid. After forty-eight hours, the whole is thrown on a filter, and the filtrate evaporated to the consistency of a syrup. The whole is then mixed with one part of glycerine and three parts of oil. A layer of the resulting mixture is spread on the linen, and covered over with cotton-wool or clean rag. This liniment has the advantage of containing a larger quantity of lime than the ordinary mixture.

10. *Zeissl on Iodide of Lithium.*—It is known that in some cases the internal administration of potassium iodide and other forms of iodine is ill tolerated by the patient. Professor Zeissl of Vienna (*Pharm. Contrablatt*, and *Pharm. Jour.*) recommends in such cases a trial of iodide of lithium, made up in the pill form with powder and extract of quassia, each pill containing 75 milligrammes of the iodide. He states that iodide of lithium is tolerated during a long time, and is not at all inferior in therapeutic effect to other compounds of iodine.

11. *Paynardeau and Tayac on the Use of Pilocarpine in Diphtheria.*—Dr. Paynardeau (*Jour. de Thérap.*, April 10, 1882), in his thesis on this subject, published at Paris, December 1881, concludes from his researches into the works published on the administration of pilocarpine by various authors that, from its sialagogue properties, it has a true but inconstant action on the detachment of false membranes. M. Archambault, in his recent communication to the Society of Therapeutics, owned that, notwithstanding some unfortunate results which have occurred under the influence of pilocarpine, false membranes are detached sooner and in larger proportion than is usually the case. False membranes of the air-passages, inaccessible to local means, may be detached and expelled by the aid of pilocarpine. Paynardeau points out that it is indicated in croup and in pseudo-membranous bronchitis before and especially after tracheotomy, but only when danger arises from the false membrane itself, and not from the diphtheritic poisoning. On the other hand, false membranes situated in the pharynx and the nasal cavities are directly accessible, and are in general sufficiently easy of detachment, either by the aid of forceps or by injections or astringent applications. But the false membrane is not everything in diphtheria. The patient less frequently dies from asphyxia than from the effect of poisoning, when false membranes have for some time disappeared, or are not very abundant. Likewise, pilocarpine does not appear to facilitate the elimination of the diphtheritic poison by the perspiration and by the salivation which it induces. It neither prevents reproduction of the false membrane nor diphtheritic paralysis. Pilocarpine induces in the digestive canal

of the circulatory apparatus symptoms which only add to the gravity of the general condition of the patients, viz., vomiting, which is sometimes violent and persistent, diarrhoea, and especially a state of prostration and collapse, so much the more to be dreaded, as diphtheria has a tendency to spontaneously induce syncope and cardiac asthenia. Therefore, M. Paynardeau disapproves of the use of pilocarpine whenever there is reason to suspect any change in the muscular tissue of the heart. M. Tayac, in a work on the same subject, published at Paris, February 1882, shows himself a decided partisan of the use of pilocarpine in diphtheria. He states that its action is prompt and energetic, and its administration nearly always followed by the elimination of the diphtheritic deposit, frequently coinciding with a sensible improvement in the general condition. If administered from the commencement, it may prevent the development of the disease, especially when it is of a relatively mild type. Its use is the more to be recommended, since it does not interfere with the employment of other therapeutic means. The author describes in detail the methods of administering pilocarpine. Dehio of St. Petersburg omits the pepsine and hydrochloric acid which are present in Guttman's prescription, and gives simply a solution of hydrochlorate of pilocarpine, to which he generally adds some sherry, so as to prevent collapse. His formula is as follows. Hydrochlorate of pilocarpine, 5 or 6 centigrammes; distilled water, 50 grammes; wine, 50 grammes; to be taken in doses of 10 grammes every hour or two hours. The kind of pilocarpine used is of importance. Dehio shows by means of various experiments that the pilocarpine of Merck (of Darmstadt) is much more active than that of Tromsdorff. It must also not be forgotten that pilocarpine is very hydrometric. It should, therefore, not be prescribed in too divided doses. Demme uses hypodermic injections. According to his researches, the initial dose of pilocarpine should be from half to one milligramme for children under a year old, increased to 5 milligrammes for children from one to ten years old. If there be no special susceptibility with regard to this medicine, the dose may be progressively increased, and the injections renewed several times daily. Lepidi-Chioti has instituted comparative experiments on the best method of administering this remedy. According to him, the action of the hypodermic injection may be valued at double of that produced by internal administration. In order to avoid the vomiting which not unfrequently follows internal administration, as well as the pain and alarm occasioned by the punctures, he prescribes enemata of 60 grammes, each containing 3 centigrammes of salt of pilocarpine. He affirms that excellent effects are obtained by the rectum much more promptly than by the stomach. He has thus obtained salivation in from ten to fifteen minutes. This fact, if it should be confirmed, would be of great importance, and injections of pilocarpine would hold the first rank in the treatment of diphtheria by this method. M. Tayac shows that the improvement produced is in direct ratio with the amount of salivation; and on this point there is complete harmony between writers on the subject. It is necessary to take careful account of individual susceptibility with regard to pilocarpine, which varies much in different individuals. In some children, the sialagogue and diphtheritic effects are in an inverse ratio, so that they may sometimes supplement each other. In addition to these effects,

there is often abundant secretion from the nasal and laryngeal membranes. In consequence of its activity, the use of pilocarpine has its drawbacks. The patients are tormented by nausea, vomiting, cramps, and gastralgia, the results of the irritation of the *primæ viæ*. Vomiting is very frequent, less annoying in children than in adults. It is advantageously combated with coffee without milk. It may be prevented by administering to the patient brandy, wine, or even an injection of ether. The most serious accident, however, is collapse. So soon as there is any menace of collapse, it will be necessary to suspend the medicine, and to give restoratives and tonics. It, therefore, appears that, notwithstanding the authoritative dictum of M. Archambault, the action of pilocarpine in diphtheria is not yet perfectly clear. It is still open to discussion, and further trials are both legitimate and necessary.

12. *Archambault on the Treatment of Diphtheritic Paralysis.*—In a lecture at the Hospital for Sick Children (*Gaz. des Hôp.*), M. Archambault has described the therapeutic indications which should guide the physician in the treatment of diphtheritic paralysis. The subjects of this disease being generally weak and anæmic, the first indication is to have recourse to preparations of iron, with a syrup of iodine of iron, and especially iron pills, which are more easily swallowed than liquids; quinine in pills of 25 centigrammes each, eight a day, is also indicated. To excite muscular contraction, tincture of nux vomica should be administered as a draught in progressive doses, commencing by ten drops, and being increased to 15 to 20 drops a day. Dry friction on the skin, or with a piece of wool impregnated with benzoin, is also prescribed to stimulate nutrition and arouse sensibility. The baths of Barèges are also an excellent stimulant. Residence at the sea-side and sea-bathing give good results in patients in whom these paralytic symptoms last for several months. To these different methods, M. Archambault adds the employment of electricity in continuous currents, which he considers as having a better effect on nutrition than intermittent currents. Finally, when it is absolutely impossible to feed the patient by the ordinary methods, on account of the danger of fits of suffocation, he has recourse either to the œsophageal sound or to nutrient injections. In reference to the ocular troubles, of which it is not generally very necessary to take much note, M. Archambault prescribes, when they have a certain persistency, a collyrium composed of 10 centigrammes of sulphate of eserine in 30 grammes of distilled water.

13. *Ollive on the Discutient Action of Alcohol employed as a Topical Application in Inflammation.*—During his dressership under Dr. Th. Anger, M. Ollive frequently saw that excellent surgeon employ alcohol as a topical application either in acute inflammations of the areolar tissue or in those of divers serous membranes, and especially of the peritoneal membrane. He was struck with the excellency of the method, and with the good results obtained in the majority of cases. Next year he became dresser in a medical ward, and several times had the opportunity of applying this treatment, which had been taught to him by Dr. Anger. His principal in this ward, M. Sevestre, was very much in favour of this method of treatment, and himself many times noted the successful effects of alcohol applied as a topical application. The direct application of this method is as follows (*France Méd.*). In the first instance, the alcohol used must be pure; as far as

possible, alcohol from 80 to 90 degrees. If either impure or not sufficiently concentrated, alcohol does not probably produce the same results. The material used is linen completely immersed in the alcohol, then wrung out so as to remove the excess which would soil the bed or the clothing of the patient. The best material to be employed for small surfaces is amadou, because it absorbs a large quantity of fluid, perhaps as much as fifteen or sixteen times its weight; but, for a large surface, old linen, cotton, or, better still, tarlatan, is preferable. The latter, folded seven or eight times, should be first rinsed out in warm water and then steeped in alcohol. The material should be shaped according to the region to which it is to be applied. The dressing is then covered with oiled silk, or, what is preferable, gold-beater's skin. The dressing should be renewed every three or four hours. After some days, the same material cannot be used, for, becoming shrunk by the alcohol, it does not absorb so well, and, therefore, the efficiency of the dressing is diminished.

14. *Foster on Iodoform in Gynecological Practice.*—Dr. Frank P. Foster, editor of the *New York Med. Jour.*, publishes, in the March number of that journal, some clinical notes of iodoform in gynecological practice, especially in pelvic peritonitis and cellulitis of a chronic form. The cases are classified according to the abnormalities ascertained to be present. 1. Cases in which inflammatory action was supposed to exist, or to have existed, but in which the uterus was freely movable without pain; 2. Cases in which the mobility of the uterus was but slightly, if at all, impaired, but in which motion of the organ was painful; 3. Impaired mobility of the uterus, with little or no pain on removing it; 4. Mobility of the uterus decidedly impaired, with pain on removing it; 5. Uterus nearly or quite immovable, with little or no pain in attempting to move it; 6. Uterus nearly or quite fixed, with decided pain on attempting to move it; 7. Cases of palpable inflammatory deposit. The most prompt and satisfactory results were obtained in the last group of cases—those of palpable pelvic exudation. Such cases, however, do better, according to the author's experience, under the more usual methods of treatment than those in which the exudation is not capable of detection by palpation, but is inferred to be present from conditions that can scarcely be explained on any other theory. But, while such is the case, it is quite as true, he remarks, that we now and then meet with bulky exudations that prove utterly rebellious to treatment. A good deal depends, no doubt, upon whether the deposit is of recent or of remote formation; and this question is not always easy to settle in the cases of patients whose past history we know nothing beyond what we may be able to elicit by questioning them. Taking the seven groups together, it seems to him that the patients progressed more satisfactorily, on the whole, than they would have done without the use of iodoform. Their proper use being assured, he would esteem the three great remedies for chronic extra-uterine pelvic inflammation in the following order. 1. Hot water; 2. Iodoform; 3. Galvanism. As to the best method of using iodoform, he prefers its application to the upper part of the vagina, and his practice is to plug the whole vaginal canal with cotton wick. This prevents the application from being washed away with the discharge, and the tampon is often of great service by its mechanical action—steading the uterus, sometimes exerting a gentle, even distension upon the deposit, and per-

haps inducing muscular contraction. The tampons may be retained for several days; his custom is, however, to direct their removal at the end of thirty-six hours. Used in this way, he has never known iodoform to betray the patient by its odour; although its taste is sometimes complained of. For occasional use, as an anodyne; in acute cases, in which the patients are not likely to be asked embarrassing questions by strangers, and in which, as well as in cases of vulvar hyperæsthesia, it is an object to avoid meddling with the genital canal; also with patients who can not have continuous treatment by the physician himself, the employment of rectal suppositories is a valuable resource.

15. *Wiegand on Wine of White Ash Bark.*—A paper on this subject, by Mr. T. S. Wiegand, is published in the *Amer. Jour. of Pharm.* This preparation has been prescribed with great success by Dr. Chas. P. Turner of Philadelphia, in the treatment of dysmenorrhœa and the troubles that frequently complicate it. The botanical name of the tree is *Fraxinus Americana*, Lin., white ash, sometimes improperly written *Fraxinus alba*. In favourable localities the tree reaches a height of eighty feet, with a diameter of three feet. It flourishes in northern New York and northward in Canada, but it is found in New Jersey, Pennsylvania, and further south and west. Its common name of white ash is most probably due to the colour of the bark, by which it may easily be distinguished. On the trunk of the tree the bark is often deeply furrowed and divided into squares of one to three inches. The foliage is made up of compound leaves consisting of three or four pairs of leaflets, with a terminal one; the leaflets being oval acuminate, petiolate, and glaucous on the under side. The bark, as found in commerce, is usually cut transversely, and when dried is of a light salmon colour, of very slight odour, and bitterish taste. The virtues are best extracted by a weak alcoholic menstruum. The following formula yields a preparation which Dr. Turner has found most useful in practice: Take of inner bark of the white ash, powd. No. 40, ℥viii ; sherry wine sufficient for Oii . Macerate the bark for three days, pack firmly in a cylindrical percolator, and displace slowly two pints. The wine thus prepared has a colour of brown sherry, and a taste quite peculiar. The usual dose is a teaspoonful three times a day.

16. *Medicinal Uses of Peroxide of Hydrogen.*—In the *Pharm. Jour. and Trans.*, of March 2, it is remarked that peroxide of hydrogen has not hitherto played a conspicuous part in therapeutics. The reason may be, that formerly pure and durable solutions were not to be had at a reasonable price. This, however, is no longer an impediment, and the tendency of the peroxide of hydrogen, as at present obtainable, to decompose can be considerably restricted; possibly peroxide of hydrogen turned into simple water, may formerly have led to wrong conclusions. Peroxide of hydrogen, if preserved in the dark, and in a temperature not exceeding 25 deg. Cent. (77 deg. Fahr.), keeps unaltered for months. Peroxide of hydrogen, like chloride, bromide, and permanganate of potassium, is probably a poison to the smallest organisms (bacteria); exact comparative experiments, with a view to ascertain this, are much to be desired. The germs of yeast are entirely killed by peroxide of hydrogen, even when greatly diluted. As regards the fitness of peroxide of hydrogen for treating wounds, caused by syphilitic, scrofulous, and tuberculous ulcers, favourable experience has been gleaned by a physician at Hanover.

It is probable that peroxide of hydrogen will do good service in the shape of spray in operating and applying ligatures. The great advantages possessed by peroxide of hydrogen, as compared with other media of disinfection, are: 1. Complete absence of smell; 2. Yielding oxygen without leaving any other residuum but pure water; 3. Absence of injurious influence on the organism. The workmen occupied in making peroxide of hydrogen get exceedingly delicate hands, and wounds heal visibly under its influence. There seems room for employing the peroxide of hydrogen as a means of disinfecting sick chambers, and generally for purifying the air. Peroxide of hydrogen has been used in dentistry by C. Sauer (*Quarterly Review of Dentistry*, No. 4, 1879), who used it with success in bleaching discoloured and carious teeth. In cases where the teeth are covered with coloured matter (*Lichen dentalis*, etc.) he employs peroxide of hydrogen in conjunction with finely levigated pumice-stone as a means of cleaning, in place of water. Teeth, the native channels of which were filled with coloured matter, became somewhat paler after several applications. A suitable liquid for cleaning teeth and mouth is prepared by mixing one part of three per cent. peroxide of hydrogen with ten parts of water. In case of carious teeth, the peroxide of hydrogen on wadding was locally used with advantage.

17. *Neuss on Preparations of Iron for Subcutaneous Injection.*—Many stomachs are intolerant of iron, even when the general condition indicates the necessity for its use. In these circumstances, subcutaneous injection is useful; and the reason that this method has not up to the present time been much used, is that the proper preparation of iron for the purpose has not yet been decided upon. Dr. Neuss (*Zeitsch. für Klin. Med.*, Band iii) undertook a series of experiments on the powers of diffusion possessed by different salts of iron and their facility for absorption. He used Graham's dialyser, and first made experiments on rabbits, the results of which he applied to the human subject. It would, however, be imprudent to draw absolute conclusions from experiments on animals, for the rabbit bears, without inconvenience, injections of iron, which in similar doses would bring on local troubles in the human subject. From his experiments, the author recommends in preference pyrophosphate of iron associated with citrate of soda, which contains a large proportion of iron (26.6 per cent.) Next comes albuminate of iron, and, finally, the pyrophosphate of iron associated with citrate of ammonia; but this in one case appears to have brought on some troublesome symptoms.

18. *Descamps on the Treatment of Pleuritic Effusions by Respiratory Gymnastics.*—Dr. Descamps has studied the action of respiratory gymnastics on pleuritic effusions (*Revue de Thérap.*, April 1, 1882). The conclusions of his paper, read to the Society of Medicine at Antwerp, were as follows. 1. There is, in the treatment of affections of the chest in general, and of pleuritic effusions in particular, an important factor of which but little note has been taken up to the present time, notwithstanding the facility of employing it. This factor is the act of respiration. 2. Deep and regular respiration may be opposed to the impediment to the circulation—to the congestion of the lung, in many cases in which external or internal influences tend to produce it. It may prevent or impede the attack of illness. 3. When the air inspired is pure and wholesome, a very favourable effect is exercised in declared pulmonary affections

by regulating the gaseous and nutritive changes, by maintaining the permeability of the bronchi, by favouring circulation, and removing congestion of the pulmonary tissue, without speaking of the general good effects which are produced by the more complete formation of the blood. 4. In cases of pleurisy with effusion and compression of the lung, the act of respiration, if well regulated, may act in a very favourable manner, or the absorption of the exudation, and on the unfolding and progressive return of the lung to its normal size, by opposing its atrophy. For this purpose, in producing the converse of the tendency which exists in these cases, the breathing should be carried on by the sound lung as little as possible, so as to force that which is compressed to respire and to become dilated as much as possible. This result may be attained by an habitually full and deep respiration, the body being in such a position, whether standing, sitting, or lying, that the filling of the chest may be reduced to a minimum on the healthy side and raised to a maximum on the affected side. In pleurisy, the respiratory action should be put into practice at a suitable time, and should not exclude the preliminary or concomitant use of other means which may be indicated. 5. In cases of thoracentesis, the best method of avoiding the accidents which accompany and sometimes follow this operation, is to favour the unfolding and the expansion of the lung by regulated respiratory exercises before, during, and after the operation. 6. The same exercises, both preparatory and consecutive, are very useful in cases of empyema, whether spontaneous or produced by operation. The pulmonary circulation, rendered more easy and more active by more regular and complete respiration, exercises a favourable influence on the general circulation, and may thus contribute to the clearing and to the return to the normal condition of important organs which have either become hyperæmic or inflamed, such as the brain, the liver, the kidneys, the peritoneum through the liver, and the intestines themselves.

19. *Cervello on Adonidin*.—In a communication to the *Archiv für Experimentelle Pathol. und Pharm.*, vol. xv., p. 235; and *Pharm. Jour.*, April 29, 1882, Dr. Cervello describes some results obtained with a substance that he considers to be the active principle of the *Adonis vernalis*, and which he has named 'adonidin'. It is a glucoside, and is amorphous, colourless, odourless, and extremely bitter. In alcohol it is freely soluble, but only slightly so in ether and in water. In dilute hydrochloric acid it is insoluble in the cold, but when heated it splits up into sugar and a substance soluble in ether. In its physiological action, Dr. Cervello found adonidin to resemble digitalin in every respect, with the exception that it is far more energetic.

20. *Vulpian on Salicylate of Bismuth in Typhoid Fever*.—In the *Jour. de Pharm.* for April (*Pharm. Jour.*, April 29), M. A. Vulpian gives an account of the treatment of typhoid fever with salicylate of bismuth, a salt which is given in doses of 30 grains, three times a day. This salt has already been recommended by M. Dujardin-Beaumetz in diarrhoea. M. Vulpian has found it useful in that complaint as well as in rheumatism accompanied with diarrhoea; but in typhoid fever it seems to have the advantage only of lowering the temperature of the body without cutting short the duration of the fever.

21. *Fox on the External Application of Chrysophanic Acid*.—An improvement in the external application of chrysophanic acid has been suggested by Dr. Geo. Fox of New York (*Med. Times and Gaz.*,

p. 826). A soft paste made by rubbing the acid with water is smeared on the skin, and as soon as this dries a layer of collodion is allowed to flow over the spot, or gutta-percha tissue is applied over the patches where the ointment of chrysophanic acid has been applied.

22. *Schwarz on the Transfusion of Alkaline Solution of Common Salt in Acute Anæmia*.—This author, considering that the cause of death from hæmorrhage, and in general the cause of acute anæmia, is the deficient filling of the vascular system and consequent diminution of blood-pressure, has performed a number of experiments on rabbits and dogs to show the use of the transfusion of an alkaline 0.6 per cent. solution of common salt. He finds that the transfusion of a large quantity of this solution, even without previous hæmorrhage, produces no bad effect, and that, after sudden and severe hæmorrhage, it prevents death, and even brings round animals at the point of death.

JAMES ANDERSON, M.D.

ELECTRO-THERAPEUTICS.

RECENT PAPERS.

1. WALLER and DE WATTEVILLE.—On the Electrotonus of the Human Nerves. (*Proc. of Roy. Soc.*, Feb. 1882.)

2. DE WATTEVILLE.—On an Electro-Therapeutical Superstition. (*Brain*, July 1881.)

3. LÖWENFELD.—On the Electro-Therapeutics of the Brain. (*Centralblatt für die Med. Wissensch.*, No. 8, 1881.)

4. LEEGARD.—On the Reaction of Degeneration. (*Arch. für Klin. Med.*, 1880; and *Brain*, Jan. 1882.)

5. BASTELBERGER.—On the Reaction of Degeneration. (*Archiv. für Klin. Med.*, 1881.)

6. ADAMKIEWICZ.—On Isogalvanic and Isofaradic Reactions. (*Charité Annalen*, Band v, 1880.)

7. RUMPF.—On the Treatment of Tabes with the Electric Brush. (*Neurologisches Centrbl.*, Nos. 1, 2, 1882.)

8. ENGELHORN.—On General Faradisation. (*Centralb. für Nervenheilk.*, No. 1, 1881.)

9. PAUL.—On the Faradic Bath. (*Le Prog. Méd.*, No. 34, 1880.)

10. FISCHER and SCHULTZE.—On the Electrical Reactions in Cases of Dementia Paralytica. (*Arch. für Psych.*, vol. xi.)

11. MÖBIUS.—On Electro-Sensitive Persons. (*Memorab.*, Nos. 4, 5, 1881.)

12. MANN.—A Case of Paralysis Agitans Cured by Electricity, etc. (*Jour. of Nervous and Mental Diseases*, No. 1, 1881.)

13. MORTON.—On Static Electricity. (*New York Med. Record*, April 1881.)

14. LÖWENFELD.—On the Electrical Treatment of Angina Pectoris. (*Aertz. Intelligenzbl.*, No. 39, 1881.)

15. CHÉRON.—On the Galvanic Treatment of Chronic Metritis. (*Rev. des Maladies des Femmes*, 1880.)

16. STAMPACCHIA.—On a New Method of Using Electricity in Neuralgia. (*Gior. Intern. delle Scienze Med.*, vol. ii, 1880.)

17. BALL.—Hemianæsthesia Removed by Static Electricity. (*Lancet*, vol. ii, 1880.)

18. KILNER.—A New Medical Galvanometer. (*St. Thomas's Hosp. Rep.*, 1880.)

19. SIEFFERMANN.—On the Electric Douche. (*Mem. de la Soc. Méd. de Strasb.*, 1880.)

20. GÜNTHER.—The Use of Electricity in Diseases other than those of the Nervous System. (*Corresp. Blatt. für Schweiz. Aerzte*, 1880.)

21. SMITH.—Galvanism in the Treatment of Puerperal Convulsions, Traumatism, and other Painful Conditions. (*Gaillard's Med. Jour.*, 1880, p. 113.)

1. *Waller and de Watteville on the Electrotonus of Human Nerves.*—The authors, in the abstract of their memoir (*Proc. Roy. Soc.*, Feb. 1882), state the results they have reached in their investigations concerning the influence of the galvanic current on the excitability of the motor nerves of man, and which coincide in a great measure with the phenomena observed on the excised frog's nerve. (a) During the flow of the current the excitability is increased at the cathode; augmented at the anode. (b) With increasing strength of the polarising current, there occurs what appears to be an invasion of the anelectrotonic by the catelectrotonic (physiological) zone. (c) After the opening of the polarising current the previously increased excitability at the cathode passes into a marked diminution of very appreciable deviation, and which gradually gives way to a renewed increase of considerable duration. The previously diminished excitability at the anode passes directly into a condition of increased excitability, of marked degree and duration. The memoir contains a description of the methods, a discussion of the sources of error and of the precautions to be taken in the experimentation, and mentions a number of phenomena incidentally observed. The modes of stimulation, or testing of the nerves, were electrical currents, galvanic and faradic, and mechanical stimuli. [For a fuller account see *Neurologisches Centralbl.*, April 1882.—*Rep.*]

2. *De Watteville on an Electro-therapeutical Superstition.*—The author says (*Brain*, 1881, p. 207): 'Under the title of galvanisation of the sympathetic has been and is being accumulated, a large amount of that kind of literature which has done much to cast discredit upon the subject of electro-therapeutics. Erroneous physics, imaginary physiology, fantastic pathology are there, worked by processes unknown to ordinary logic into a sort of mystical creed.' This statement is illustrated by quotations from several authors. The alleged physiological effects of the method are then discussed, and stated to be either imaginary or due to other causes than to the excitation of the sympathetic itself, whilst no undisputed proof of such an excitation (vaso-motor constriction, dilatation of pupil, etc.) has ever been furnished.

3. *Löwenfeld on the Electro-therapy of the Brain.*—The author (*Centralbl. für die Med. Wissenschaft.*, 1881, No. viii) has made many experiments on animals, and arrives at the following conclusions. 1. The ascending current (positive pole to the neck, negative pole to the forehead) causes dilatation of the arteries of the pia mater; the descending current a constriction of the same. 2. Transverse currents (from temporal to temporal) produce dilatation on the side of the anode, and constriction on the side of the cathode. This pamphlet contains an elaborate study of all what has been written on the subject of galvanisation of the brain from a clinical point of view. His own conclusions occupy little space, and may be summed up that the positive pole is to be applied to the skull to increase, the negative to diminish, the circulation in the brain. [Admitting the reality of the author's results, it would still be more than doubtful that they could be obtained on the human subject. In order to have currents of equal density in the cases of a rabbit's and a man's brain respectively, their strength ought to be proportional to the diameter of their brains. Now the author used currents of such strength in his experiments, as to make corresponding applica-

tions to a human brain a very questionable proceeding. His current-measurements, however, were very superficially made, and he had to employ a magnifying glass to discover the vaso-motor changes.—*Rep.*]

4. *Leegard on the Reaction of Degenerating Nerves and Muscles.*—The author describes (*Arch. für Klin. Med.*, 1880, and *Brain*, Jan. 1882) the results of his experiments on degeneration of nerve, both from the histological and the physiological point of view. The reader is referred elsewhere for a fuller account of the matter. After a ligature has been applied to the nerve of a rabbit so as to destroy the continuity of the axis and myelin only, the electrical excitability of the nerve dwindles and disappears on the third day. Voluntary motion reappears before electrical excitability. With reference to the latter, the author notes that reaction to galvanism often precedes reaction to faradism, and has observed qualitative alterations of the formula. With reference to muscle, faradic inexcitability is observed in about four days. Galvanic inexcitability diminishes in this sense, that the amplitude of the contractions do not keep pace with the increase of current strength. The A.C.C. approximates the K.C.C., but was never seen to overtake it. The opening contractions disappear, but H.O.C. was never found greater than K.O.C. The mechanical superexcitability, characteristic of human muscle separated from its nerve-centre, has not been observed by the author.

5. *Bastelberger on the Reaction of Degeneration.*—The author (*Arch. für Klin. Medicin.*), experimented on twelve rabbits. The sciatic nerve was carefully divided (under the antiseptic spray), and the reactions observed both through the skin and by direct stimulation of the muscles and nerves. The results fully confirmed Erb's description of the reactions of degenerating nerve and muscle as observed on the human subject.

6. *Adamkiewicz on Isogalvanic and Isofaradic Reactions.*—The author (*Charité Ann.*, Band v) describes a case of bulbar paralysis, in which the reactions of the muscles were very peculiar. Some did not contract to the faradic current, which did normally to the galvanic current. In another case (recovery from typhus), the tibiales antici responded to the stimulus of the will, and also to the faradic current, but not to the strongest galvanic stimulus. These reactions he proposes to call isogalvanic and isofaradic respectively; and concludes from these facts that the muscular response to electricity is an independent function of the contractile substance. [Such sweeping generalisations from slender data are premature.—*Rep.*]

7. *Rumpf on the Treatment of Locomotor Ataxy with the Electric Brush.*—The author (*Neurol. Centralbl.*, No. 1, 1882) describes a case of ataxy of eleven years' duration, in which counter-irritation along the spinal column by means of the faradic brush relieved the symptoms in a remarkable manner. The patient, who was shown to the Dusseldorf Medical Society, had been subject, during the whole period, to severe lancinating pains, to which 'crises gastriques' had been superadded in the course of the disease. Sensation was impaired and altered in hands and feet. The gait was typically ataxic, as well as the finer movements in both upper and lower extremities. There was also bladder disturbance, absence of knee-jerk and plantar reflex, feeling of extreme fatigue, etc. Dr. Rumpf determined to test the effects of cutaneous excitation in this case, and

accordingly submitted the patient to the effects of the faradic brush, applied every other day for ten minutes along the spine. A diminution of the symptoms was forthwith observed. After five applications the pains had disappeared. The serious disturbances in the legs also showed signs of improvement. After a month's treatment, the ataxy was distinctly less. Galvanisation of the spine was then resorted to on the off days, with the result that, in another month's time, the patient resumed his occupation. The improvement had persisted up to the day on which he was exhibited by Dr. Rumpf (*i.e.*, thirteen months). The knee-jerk was, however, still absent. In another case, the patient, who had had syphilis twenty years previously, gradually developed symptoms of lancinating pains, anæsthesia, and paræsthesia in the legs. Motor disturbances supervened; ataxy, titubation (especially in the dark), irregular micturition. On examination, there was no absence of tendon and skin reflexes, but the muscular sense was deficient, and the sense of pain delayed in transmission. The galvanic current and antisyphilitic treatment had no effect. The faradic brush, used as in the preceding case, rapidly brought about a considerable improvement in most of the symptoms, so that, up to date (two years), patient has been able to resume his ordinary occupations with comfort. The author has tried the brush in a series of cases, which will be published after sufficient time has elapsed to allow judging of the results. The treatment is of no value in some cases, and positively contra-indicated in others. Perhaps anæsthesia and pain in disease of not too long standing are the symptoms which yield the chief indication for its use.

8. *Engelhorn on General Faradisation.*—The author relates two cases (*Centralbl. für Nervenheilk.*, 1881) in which the plan of treatment advocated by Beard and Rockwell yielded excellent results. The first was one of general debility and depression in a girl suffering from epilepsy. The symptoms (headache, vertigo, palpitation, dyspepsia, insomnia, etc.), rapidly subsided, and the general nutrition was greatly improved after a dozen applications (two or three weekly), though the epileptic condition was not materially altered. The second case is one of hysterio-melancholia, in which the accompanying symptoms were similar to those just mentioned. The same treatment had a most beneficial effect. The author insists upon the sense of comfort derived from the very first applications of the current.

9. *Paul on the Faradic Bath.*—The author (*Prog. Méd.*, 1880, p. 34) has made experiments on the value of the faradic bath in the treatment of various tremors chiefly. He uses the primary current (extra current), which is conducted to two plates immersed in the water, one (positive pole) at the head, the other at the feet. The cases in which the treatment was found beneficial were mercurial and alcoholic tremors, and the tremors of spinal irritation and disseminated sclerosis. Paralysis agitans was relieved. In chorea the results were not uniform. Locomotor ataxy was not improved; on the other hand, a case of partial paraplegia recovered.

10. *Fischer and Schultze on the Electric Reactions in Dementia Paralytica.*—Fischer and Schultze (*Arch. für Psych.*, Band xi) find that the electrical reactions of dementia paralytica, even when considerable cerebro-spinal degenerations are present—the anterior horns and roots being intact—are not materially altered. Svetlin had asserted that in all such cases there was increased excitability, diminished

electrical resistance of the tissues, and qualitative alteration of the polar formula. These assertions the authors have no difficulty in showing to be erroneous. Their general conclusion is, that electro-diagnosis is of no avail to prove spinal alterations in the disease.

11. *Möbius on Electro-Sensitive Persons.*—The author (*Memor.*, 1881) thinks that persons who are readily influenced by electrical current, displaying, for instance, phenomena of sleepiness, hunger, cough, salivation, eccentric sensations during or after galvanisation, are more readily amenable to electro-therapeutical measures than those who are less readily influenced. [Perhaps in the latter, who bear much stronger currents, a more energetic treatment is indicated.—*Rep.*]

12. *Mann on Paralysis Agitans.*—The author relates (*New York Jour. of Nervous Diseases*, 1881, No. 1) a case of so-called paralysis agitans, more probably, however, of emotional nervousness or hysteria, characterised by generalised tremor, in which the patient was 'cured' by central galvanisation, and general faradisation, together with bromide of potassium and hyoscyamine.

13. *Morton on Static Electricity.*—The author (*New York Med. Record*, April 1881) has tried the therapeutic value of this agent, and comes to the conclusion that it is of equal value to faradism and galvanism, or superior to them in certain conditions, such as anæsthesia. It is useful in hemiplegia of long standing. Long and strong sparks to the spine are useful in paraplegia. Positive charging acts as a 'tonic medicine'. Besides conditions of paralysis, spasm, neuralgia, static electricity benefits subacute or chronic rheumatism in a high degree. An important factor in its curative influence is the reflex stimulation from the cutaneous nerves. The author speaks highly of his method of obtaining 'an interrupted static induction current from a frictional electrical machine' as particularly useful.

14. *Löwenfeld on the Electrical Treatment of Angina Pectoris.*—The author relates (*Aertzl. Intelligenzbl.*, 1881, No. 39) a case of angina pectoris in which galvanisation proved beneficial. The patient, a man, aged 47, was subject to attacks of the disease occurring every month or two. These were characterised by excited respiration, oppression, small frequent pulse, sternal pain radiating in the left arm, convulsive tremors of the limbs, and lasted about one hour. The heart was normal. The constant current was applied for one minute to each side of the neck along the course of the pneumogastric. The sense of oppression was immediately relieved. Ten such applications in the course of three weeks were followed with complete freedom from the attacks during more than two years.

A. DE WATTEVILLE.

MEDICINE.

RECENT PAPERS.

1. COCKLE.—Typhoid Fever attended with Extensive Laceration and Perforation of the Rectum. (*Lancet*, Feb. 1882, p. 178.)

2. ALEXANDER.—Cure of Epilepsy by Ligature of the Vertebral Arteries. (*Med. Times and Gaz.*, March 1882.)

3. LEDIARD.—Phthisis without Sputa. (*Med. Times and Gaz.*, April 1882, p. 328.)

4. COOK, H.—On Orthopnoea. (*Practitioner*, April 1882, p. 242.)

5. WEBBER.—Paraplegia from Functional Weakness. (*Boston Med. and Surg. Jour.*, Jan. 19, 1882.)
6. DRASCHE.—Diabetic Neuralgia (*Wiener Med. Woch.*, Nos. 1 and 2, 1882.)
7. STYCKLER.—Erysipelatous Bronchopneumonia. (*Gaz. des Hôp.*, No. 104, 1881.)
8. DANIN.—Sudden Death in Phthisis consequent on Entry of Air into the Vessels. (*Berl. Klin. Woch.*, No. 5, 1882.)
9. LEWINSKI.—Methods of Auscultation. (*Ibid.*, No. 6, 1882.)
10. POPOFF, T.—Embolism of the Coronary Arteries of the Heart. (*Vratch.*, No. 2, 1882, pp. 29, 30.)
11. LESENEVICH, B.—Febris Intermittens Larvata. (*Vracheb. Vedom.*, No. 4, 1882, p. 2951.)
12. PENNA.—Echinococci in the Lungs. (*Gaz. Med. Ital. Prov. Ven.*, No. 1, 1882.)
13. SAUNDBY.—Influence of Bright's Disease in Developing Latent Valvular Disease of the Heart. (*Lancet*, Jan. 21, 1882.)
14. KRETSCHY.—On Scurvy. (*Wiener Med. Woch.*, No. 52, 1881.)
15. RENNERT.—Hydrocephalus a Hereditary Sequence of Chronic Lead-poisoning. (*Archiv für Gynæk.*, Band xviii.)
16. STRUBING. — Paroxysmal Hæmoglobinuria. (*Deutsche Med. Woch.*, No. 1, 1882.)
17. FLEISCHER.—Paroxysmal Hæmoglobinuria. (*Berl. Klin. Woch.*, No. 47, 1881.)
18. MORRILL.—On Hæmoglobinuria. (*Boston Med. and Surg. Jour.*, 1882, No. 5.)
19. BOWELL-STURGE.—Complete Excavation of the Lung. (*Nice Méd.*, Feb. 1882.)
21. GUILLIOT.—A Case of Locomotor Ataxy. (*L'Union Méd.*, Jan. 10.)
22. SEÉ.—Trichinosis in Man.
23. GIBNEY.—Intermittent Spinal Paralysis. (*American Jour. of Neur. and Psych.*, vol. i, No. 1.)

1. *Cockle on a Case of Typhoid Fever attended with Extensive Ulceration and Perforation of the Rectum.*—Dr. John Cockle, in the *Lancet*, Feb. 1882, p. 178, reports a case of a woman aged 28, who was admitted into hospital in the second week of the disease. In the fourth week, during a severe attack of cough, she first noticed severe pain at the lower part of the abdomen, and died comatose in twenty-four hours. At the *post mortem* examination, the small intestines, three feet from the ileo-cæcal valve, contained traces of healed typhoid ulcers; and lower down, among Peyer's patches, were numerous ulcers. In the whole length of the colon were many ulcers, and the muscular coat was extremely brittle, and friable. In the sigmoid flexure the ulcers were numerous and smaller, and a large one had perforated and caused death, the rupture taking place during the violent cough.

2. *Alexander on the Cure of Epilepsy by Ligature of the Vertebrae.*—In the *Med. Times and Gaz.*, March 1882, p. 250, Dr. Wm. Alexander reports fifteen more cases, in which he has ligatured one or both vertebral arteries with great advantage. [*Vide LONDON MEDICAL RECORD*, Jan. 1882, p. 14.]

3. *Lediard on Phthisis without Sputa.*—Dr. H. A. Lediard, in the *Med. Times and Gaz.*, April 1882, p. 328, gives the history of two cases, men aged respectively 53 and 29, in whom, during the whole course of their illness, there was never any expectoration. It was a remarkable coincidence that both lived exactly four months from the commencement of the disease. In neither was there any hæmoptysis, and scarcely any cough. Unfortunately, in neither was a *post mortem* examination possible. Dr. Lediard compares such cases to the destructive process in the joints known as 'caries

sicca'. The absence of sputa is evidently not at all a favourable sign in this form of disease.

4. *Cook on Orthopnoea.*—Dr. Henry Cook, in the *Practitioner*, April 1882, p. 242, indicates the cause of the loss of arterial tonus that causes orthopnoea in certain cases when in the recumbent posture. On one occasion, Dr. Cook himself was the victim of a severe attack of otitis, the agony of which compelled him to pass the whole night sitting erect, in which posture alone was the pain at all endurable. As the night wore on, he wished to rest his back with pillows, but instantly the throbbing of the vessels was intense on account of loss of arterial tonus. It seems that the prone position itself was not the cause of loss of tone, but the support afforded to the body, muscular tension being removed. To test this theory, a student was placed prone on three chairs, and a sphygmographic tracing taken, the body being completely at rest. The central chair was then removed, and another tracing of the radial pulse taken, when the traces exactly resembled those obtained in the upright posture. It is, therefore, clear that the variation in arterial tonus is due not to posture only, but to the exertion of muscular force; and hence the reason why relief is obtained in orthopnoea by the erect posture and by the violent muscular efforts which many asthmatics make. R. NEALE, M.D.

5. *Webber on Paraplegia (Paraparesis) from Functional Weakness.*—Dr. Webber (*Boston Med. and Surg. Jour.*, Jan. 19, 1882) has described three cases of loss of motor power in the lower extremities, all occurring in women, and apparently unconnected with serious organic lesions in the spinal cord or other portions of the nervous system. One of them was a case of 'spinal irritation', with much tenderness over the whole spine and epigastrium, slight tremor of hands, increased patellar tendon-reflex on the left side, the walk being feeble, and the patient inclined to fall with the eyes shut. There was a history of long continued ill-health, viz., 'lung-fever' (?), typhus, and typhoid, rheumatic and intermittent fever, and spinal meningitis, together with several accidents. Whether she really had spinal meningitis appears doubtful, while great muscular debility after typhoid fever is not uncommon. She recovered, apparently under the influence of dry-cupping. In the second case, an attack of scarlet fever at five years of age left the patient weak, and she became, ultimately, entirely unable to walk, stand, or sit, or even to hold her head up; yet sensation was not affected, and the faradic response of the muscles was normal. The state of the tendon-reflexes is not mentioned. She had also kidney-disease, as evidenced by the presence of albumen and granular casts in the urine. She recovered to a great extent under the influence of iron, massage, electricity, and steam-baths. This was, no doubt, a case of nervous exhaustion after fever, and aggravated by over-exertion. In the third case, it appeared doubtful whether it was functional or one of myelitis; but the result showed that it was of the former kind. It occurred in a woman who had worked a sewing-machine with her foot for twelve years, and had also to take care of her sick children, before the commencement of her illness. The seat of the disorder may be either the muscular or the nervous system. Muscular fibres may be so overtaxed as not to recover their normal condition in the time allowed for rest; they then undergo degeneration, or are too easily fatigued. This degeneration, however, must be of a slight character, as it is expressly stated that the faradic response of the muscles was normal. The diagnosis between myelitis and func-

tional debility is not always easy, but of course very important; and Dr. Webber relies a good deal here on the absence or presence of tenderness in the spine; the former being met with in myelitis, and the latter in functional affections. Also, sensation is less affected in spinal irritation than in myelitis; there is rather paresis than paralysis; but the condition of the bowels and the bladder cannot be much depended upon, as it may be affected in the earlier stages of myelitis, and there may be slight disturbance of these organs in nervous exhaustion. Absence of wasting of muscles distinguishes the affection from poliomyelitis, and presence or exaggeration of tendon-reflex from ataxy. In some patients the emotional element is prominent, and they easily shed tears. The best treatment seems to be rest, electricity, massage, cupping or the actual cautery applied to the back, iron, quinine, and strychnia. Recovery of strength is slow, and treatment of severe cases must extend over months.

JULIUS ALTHAUS, M.D.

6. *Drasche on Diabetic Neuralgia.*—Professor Drasche (*Wiener Med. Woch.*, Nos. 1 and 2, 1882; *Prag. Med. Woch.*) adds two cases of symmetrical neuralgia in diabetic patients to those previously recorded by Worms. The association of severe neuralgia of the peripheral parts of nerves (especially of the sciatic and inferior dental nerves) with glycosuria, has already been well observed; but, until lately, observations have been wanting on the symmetrical occurrence of certain forms of neuralgia in diabetes. In Worms' cases, symmetrical neuralgia of similar points in homologous nerves (sciatic and inferior dental) was found to be in direct proportion with the glycosuric state, and, resisting all ordinary remedies for neuralgia, was alone relieved by strict antidiabetic diet. These forms of neuralgia are some of the most painful, and Worms places them in the category of diathetic neuralgiæ, such as are apt to occur in gout, lead-poisoning, etc. In Dr. Drasche's cases, one of symmetrical and the other of unilateral neuralgia, the severity of the pain was in direct proportion with the amount of sugar in the urine. In one case, regular exacerbations of pain took place after meals. The writer comes to the conclusion that a form of neuralgia may occur in diabetes, which has its origin solely in the toxic effect of the sugar upon the peripheral nerves; that such a form is more frequently symmetrical than unilateral, and may occur with greater or less degrees of glycosuria, the intensity of the pain varying with the quantity of the sugar, and being relieved only by the restricted diet. Any persistent neuralgia, therefore, which resists ordinary treatment, should arouse a suspicion of diabetes.

7. *Stackler on Erysipelatous Bronchopneumonia.*—Dr. Stackler (*Gaz. des Hôp.*, No. 104, 1881) records a case observed by him in the Hôtel-Dieu, of wandering erysipelas affecting the face, pharynx, neck, back, etc., accompanied by an acute pulmonary affection. Beginning with coryza and angina, the disease progressed very rapidly, in three days developing the signs of partial consolidation of the base of the right lung and bronchopneumonia of the left, followed by as rapid a stage of resolution and a good recovery. Erysipelatous bronchopneumonia was diagnosed, the lung-affection being regarded as a result of the spreading, by continuity, of the process affecting the external parts. Dr. Damaschino saw three such cases, in one of which the diagnosis was fully confirmed by the necropsy.

8. *Dunin on Sudden Death in Phthisis Conse-*

quent upon Entry of Air into the Vessels.—Dr. Theodor Dunin of Warsaw (*Berl. Klin. Woch.*, No. 5, 1882) relates the details of a case of sudden death from this cause. The patient, aged 22, suffered from phthisis, with multiple excavation of both lungs. Expectoration was scanty, purulent, and offensive. After three weeks in hospital he suddenly fell down, and died shortly afterwards without convulsions or any other symptoms. The necropsy (twenty-four hours after death) showed tubercular disease, with one cavity in the right and three in the left lung. Of these latter, two were filled with cheesy masses, and the third, situated deeply in the lower lobe, contained a small quantity of frothy blood. The heart was slightly dilated, and its left side filled with red fluid blood containing innumerable tiny air-bubbles. In the right ventricle and in all the larger systemic arteries, as well as in the vena cava and the pulmonary vein, a similar appearance was found. All the arteries and veins of the brain were dilated and nearly filled with air. The *post mortem* changes were not marked, and none of the parenchymatous organs contained gas. Dr. Dunin points out that the entry of air must have taken place in the small cavity which contained frothy blood, and that a branch of the pulmonary vein must have conveyed it, although no open vessel could be traced, since a vein alone would present the necessary conditions for each entry, being easily emptied during the diastolic contraction of the heart. The very slight hæmorrhage is also explained by this; had an artery given way, the hæmorrhage must have been far greater. Air, having been found in the right ventricle, must have completed the vascular circle, but it is probable that death took place at the same instant. The immediate cause of death was anæmia of the brain. No explanation is, however, afforded as to the cause of so rare an occurrence; but a suggestion is thrown out that its rarity would become less striking, if a more careful examination were made in all cases of sudden death in phthisis.

9. *Lewinski on Methods of Auscultation.*—Dr. Lewinski (*Berl. Klin. Woch.*, No. 6, 1882) has compared, for auscultatory purposes, the solid and the tubular stethoscopes respectively. He comes to the conclusion, that immediate auscultation gives the most correct results, but that for mediate auscultation the tubular instruments are preferable, especially in conveying the more delicate of the morbid pulmonary sounds. The sources of error arising from the resonance in the air-space itself may be lessened by making the perforation as small as possible, the tube not too long, and the ear-piece not too much excavated. He recommends a conical shape for the chest-piece. E. CLIFFORD BEALE, M.B.

10. *Popoff on Embolism of the Coronary Arteries.*—Dr. Popoff (*Vratch*, 1882, No. 2), describes the following case of this rare affection. The patient, a sailor, aged 53½, had had an apoplectic attack about one-and-a-half years previously, at which time aortic insufficiency had been recognised. One morning there suddenly appeared sickness and vomiting. When immediately seen by the author, the patient bore an appearance of extreme horror, and was sitting, being unable to lie down. His extremities were cold and covered with clammy perspiration; his lips were livid. Examination showed complete absence of the pulse in all accessible arteries, and neither apex-beat nor heart-sounds could be detected. The ear, applied to the cardiac region, could hear only a kind of cardiac tremor, which was very like the sound of a vibrating steel-plate. There

was no loss of consciousness. Respiration was regular and rhythmical, not exceeding eighteen to twenty. Twenty hours after the first symptoms, the patient was dead. This affection was diagnosed during life, though the author had never before met any similar case in his practice. The alternative in diagnosis lay between embolism of a branch of a basilar artery, and embolism of the coronary arteries of the heart. Dr. Popoff accepted the latter alternative, on the ground (1) of the regularity and rhythmic character of the respiration; and (2) of the enfeeblement of the heart's action, which was transformed into simple oscillatory movements. Necropsy confirmed the diagnosis. There were found sclerosis of all the blood-vessels at the base of the brain; anæmia of the brain; venous congestion of the cranial bones and meninges; old apoplectic foci in the stage of softening, in the right corpus striatum, and the posterior horn of the right lateral ventricle; pericarditis, endocarditis, and myocarditis; ossification of both coronary arteries of the heart, with complete thrombosis of their longitudinal branches; œdema of the lungs, and venous hyperæmia of the spleen, the liver, and the kidneys. [The cardiac symptoms observed in the case are in strict harmony with the results of Samuelson's experiments on ligation of the coronary arteries in rabbits. See LONDON MEDICAL RECORD, Jan. 1881, p. 36.—*Rep.*]

11. *Lesenevich on Febris Intermittens Larvata.*—Dr. Lesenevich (*Vracheb. Vedom.*, 1882, No. 4), who practises in a malarial town, Piriatin, where intermittent fever is constantly endemic, records that last winter he very often met cases of febris larvata, characterised by typical periodical paroxysms of neuralgic pains in the region of the fifth nerve. A single dose of eight or ten grains of quinine usually cut short the affection.

V. IDELSON, M.D.

12. *Penna on a Case of Echinococci in the Lung.*—Dr. Penna records an interesting case of hydatids in the lung (*Gazzetta Medica Italiana Prov. Venete*, No. 1, 1882). The patient was a man aged 32, who presented himself at the hospital complaining of severe pain in the left side of the chest, with cough, occasional bloody expectoration, and dyspnoea. The physical signs were relative immobility of the right side of chest, with absolute dullness on percussion in the supraclavicular and subclavicular regions, together with occasional mucous râles. Some days after the case had been seen for the first time, the patient again presented himself, stating that, during a paroxysm of coughing, he had expectorated about a pint of watery fluid, together with a large piece of membrane, which was found on examination to be the mother-cyst of an hydatid tumour. The abnormal physical signs after this rapidly ceased, and the patient was able to leave hospital within a fortnight.

LITTON FORBES.

13. *Saundby on the Influence of Bright's Disease in developing Latent Valvular Disease of the Heart.*—The author (*Lancet*, Jan. 21, 1882) has observed that many cases of organic disease of the heart remain for long latent if no fresh attack of endocarditis come on, and if pregnancy and renal disease can be avoided. He records the case of a man who had acute rheumatism twenty years before being seen by him, but who, a few months before admission to hospital, had walked 105 miles in twenty-four hours. For three months he had suffered from polyuria, and on admission he had anasarca, cardiac murmurs, and pulmonary œdema. On *post mortem* examination, there were obliteration of the pericar-

dial cavity, mitral and tricuspid stenosis, with dilatation and hypertrophy of the left ventricle; the kidneys were granular and fatty (mixed form). This is a good example of the influence of renal disease in causing a break-down of the circulation, and rapid failure of the patient's system. No one can imagine that the renal disease caused the stenosis; and the only conclusion is that the disease of the valves was latent for twenty years, and might have remained so much longer, if the renal affection had not made its appearance. G. A. GIBSON, M.D.

14. *Kretschy on Scurvy.*—This writer has, in the course of nine years, observed sixty-four cases of scurvy, and finds that in a series of patients there was a darkness of the urine without diminution in quantity, and without the presence of fever (*Wien. Med. Woch.*, 1881, No. 52). During improvement, the urine became gradually clearer. The urine in these cases was acid, showed no albumen or blood-colouring matter, but contained a larger amount of urea. From this, the observer argues that scurvy commences with an increased destruction of the blood-corpuscles, which process continues so long as the disease is on the increase.

JAMES ANDERSON, M.D.

15. *Hydrocephalus as a Hereditary Sequence of Chronic Lead-Poisoning.*—Dr. B. Rennert of Frankfurt (*Arch. für Gyn.*, Band xviii, Heft 1), from observations of eleven families, with seventy-nine children, at a village in Hesse, where the larger part of the inhabitants are employed in the glazing of earthenware, and who suffer largely from chronic lead-poisoning, attributes to this cause the high mortality, amounting to 50 per cent. of the children during the first five or six years of life; and the survivors suffer from hydrocephalus, or an enormous size of the head, but without any symptoms of rickets, nor do they show any special tendency to convulsions.

EDWARD F. WILLOUGHBY.

16. *Strubing on Paroxysmal Hemoglobinuria.*—Dr. P. Strubing of Greifswald (*Deutsche Med. Woch.*, No. 1, 1882) has described the case of a man, aged 29, in whom the first symptom of the attack was a greyish coloration of the face. The attacks in which dark-coloured urine was passed always occurred in the morning, and usually after violent muscular exertion. The symptoms after the attack were pains in the enlarged spleen and liver, dyspnoea, palpitation, muscæ volitantes, tinnitus, giddiness, and dullness. There was no sensation of cold or heat. There was no evidence of cold as a factor in producing the attacks. The blood examined shortly after an attack, was about normal, and contained only a few pale small and dotted corpuscles. The urine passed during the attack contained an abundant sediment of detritus, finely granular and hyaline cylinders the latter with a few renal epithelial cells adherent; also some yellow-stained epithelium from the kidney and bladder, crystals of uric acid, and oxalate of lime, needle-like crystals of hæmatoidine, and yellowish-red masses of hæmatoidin. After the paroxysms, the urine contained albumen, and gave the spectroscopic characters of methæmoglobine; it also contained excess of biliary acids. During the attacks the patient was much prostrated; the nitrogen excreted by the urine was very little; the phosphoric acid excreted was less than the normal amount.

17. *Fleischer on Paroxysmal Hemoglobinuria.*—Dr. R. Fleischer (*Berl. Klin. Woch.*, No. 47, 1881) describes a case of paroxysmal hæmoglobinuria, in which the attacks were not related in any way to cold, but were invariably brought on by walking,

while other even more laborious exercise did not produce them. There was little general derangement, and no change in the pulse or temperature, or the state of any internal organ. The serum of a blister formed during the attack contained hæmoglobin.

18. *Morrill on Hæmoglobinuria.*—Dr. F. Gordon Morrill (*Boston Med. and Surg. Jour.*, No. 5, 1882) describes a case of paroxysmal hæmoglobinuria in a man who had contracted malarious fever in California. The urine during the attacks was of specific gravity 1025, faintly acid, albuminous, deposited amorphous granular matter, containing a few granular casts, but no blood-discs nor oxalates. He quotes Murri as having cured two cases by anti-syphilitic remedies. The treatment in this case consisted of quinine and iron.

19. *Bovell-Sturge on Complete Excavation of the Lung.*—Dr. Emilie Bovell-Sturge has drawn attention (*Nice Méd.*, Feb. 1882) to certain cases of pulmonary disease in which, on *post mortem* examination, one lung, usually the left, has been found collapsed, adherent, with great thickening of the pleura, and the whole of its substance excavated so as to form a vast cavity, traversed by fibrous bands representing the interlobular connective tissue and large vessels. These cases did not present the general phenomena of phthisis during life; while their course was extremely slow. The author thinks the excavation is probably effected by the formation in the first place of a dilated bronchial cavity, and by the gradual erosion of the walls of this cavity by the irritation of the contained fluid.

20. *Guelliot on a Cause of Locomotor Ataxy.*—M. Guelliot (*Union Méd.*, Jan. 10, 1882) has met with two cases of women, manifestly hysterical, workers at the sewing machine, who complained of pains, which, beginning in the foot, had successively invaded the leg, thigh, and finally the trunk. Motor inco-ordination did not appear till after a long interval. On investigation, he found that ataxy had been seen relatively frequently among those who worked with the sewing machine. Vernois, Espagne, Decaisne, and Taget had regarded pedal machines as the cause of nervous troubles in the lower limbs. Dr. Webber (*Boston Med. and Surg. Jour.*, Jan. 19, 1882) has published the case of a woman who had worked at a sewing machine for twelve years, and entered the City Hospital, with great weakness in the lower limbs, pains in the legs, numbness of the feet and legs; the patellar tendon reflex was abolished; walking was difficult, especially with the eyes closed. Two or three months later, she was much better.

21. *Seé on Trichinosis in Man.*—Professor Germain Seé (*Jour. de Méd.*, 1882), in a recent clinical lecture, after referring to the discovery of Zenker of Leipsic in 1860, pointed out that there are four forms of trichinosis observed in man; gastro-intestinal, rheumatoid, oedematous, and typhoid. The first is characterised by diarrhoea, vomiting, and a resemblance to cholera, from which it may be distinguished by the absence of rice-water stools, and the presence of excessive and profuse perspiration, and by considerable muscular prostration. In the rheumatoid form there are muscular pains, with weakness and swelling of the muscles, later on contraction, with all the functional troubles resulting from an affection of the muscles of the larynx, pharynx, and chest. The oedematous form is more characteristic; unilateral oedema of the face, without albuminuria or heart-disease, with great prostration, gastro-

intestinal symptoms and muscular pains, being nearly pathognomonic. The typhoid form resembles enteric fever, differing from it chiefly by the profuse sweats, the oedema of the face, and the rapid fall of the fever. The symptoms of the four forms ordinarily coincide more or less, so that clinical picture is the result of their combination.

22. *Gibney on Intermittent Spinal Paralysis.*—Dr. V. P. Gibney (*Amer. Jour. of Neurol. and Psych.*, vol. i, No. 1, 1882) has published two cases of intermittent, or, rather, it appears to us, recurrent paralysis in children, who had been exposed to malarial influences, and which recovered under the use of quinine. In the first case there were five attacks at intervals of one or more months, and lasting from one week to six months. There was distinct wasting of the thenar and hypothenar muscles, with flabbiness and weakness of the suprascapular muscles, the flexors, and extensors of the fingers, in both upper extremities; in the lower extremities, the flexors and adductors were wasted, the extensors of the leg were wasted, there was no power to flex the foot, and extension was far from normal; the paralysis was symmetrical. In the second case, there were three attacks; there was no wasting, but much weakness and flabbiness of the muscles; both upper and lower extremities were affected. His first attack got well in a few weeks without medical aid; the second, a year after, was treated in hospital, and lasted six months. The third attack was six months later, and in it he died; but Dr. Gibney did not see him, and there was no necropsy; its duration was two weeks. [These cases differ from the intermittent malarial paralysis mentioned by Erb, in which the paralysis comes on regularly, and passes off after a few hours like an attack of ague, and may be arrested by quinine.—*Rep.*] ROBERT SAUNDBY, M.D.

SURGERY.

RECENT PAPERS.

1. GALLOZZI.—A Rare Disease of the Parotid. (*Giorn. Intern. delle Scienze Med.*, No. 1, 1881.)
2. NEGRETTO.—The Radical Cure of Hydrocele by Intravenous Injections of Chloral Hydrate. (*Gaz. Med. Ital. Prov. Venete*, Jan. 14, 1882.)
3. GROSS.—Carcinoma of the Breast. (*New York Med. Gaz.*, Feb. 11, 1882.)
4. MORTON.—The Uses of Nerve-Stretching. (*New York Med. Record*, March 4.)
5. THIERSCH.—The Employment of Nerve-Stretching. (*Boston Med. and Surg. Jour.*, No. 9, 1882.)
6. BLUM.—On Nerve-Stretching. (*Le Prog. Méd.*, No. 11, 1882.)
7. ARTAUD and GIBSON.—Nerve-Stretching. (*Revue de Chir.*, Feb. 1882.)
8. COPPEZ.—Nerve-Stretching for Facial Neuralgia. (*Annales d'Ocul.*, Jan. and Feb. 1882.)
9. SHRADY.—The Treatment of Fracture of the Patella by the Weight and Pulley. (*New York Med. Record*.)
10. STEVENSON.—Mosquito Bites. (*Edin. Med. Jour.*, Feb. 1882.)
11. PICARD.—Hot Water in Blennorrhoea. (*Phil. Med. and Surg. Rep.*, Jan. 14, 1882.)
12. KRETSCHMAR.—Aspiration of the Gall-Bladder. (*Proceedings of Med. Soc. of County of Kings*, Sept. 1881.)
13. BOUILLY.—Acute Mediastinitis after Excision of Hypertrophic Goutre. (*Revue de Chir.*, No. 1, 1882.)
14. WÖLFLE.—The Influence of Esmarch's Bloodless Method on the Absorption of Fluids. (*Langenbeck's Archiv*, Band xxvii.)

15. WOLFF.—Bloodless Operations. (Langenbeck's *Archiv*, Band xxvii.)

16. JURASZ.—The Treatment of Excessive Deviation of the Nasal Septum. (*Berl. Klin. Woch.*, No. 4, 1882.)

17. SUBBOTIN.—Treatment of Hæmorrhoids by Forcible Dilatation of the Anus. (*Mejdun. Clinica—International Clinics*, No. 1, 1882, pp. 22-25.)

18. SYMONDS.—A Case of Osteitis Deformans. (*Guy's Hosp. Reports*.)

19. HARRISON.—The Radical Cure of Varicocele. (*Lancet*, March 1882, p. 477.)

20. BOND.—Death after Operation for the Relief of Strangulated Hernia. (*Lancet*, March 1882, p. 478.)

21. HEATH.—Fractured Patella. (*Brit. Med. Jour.*, March 1882, p. 422.)

1. Gallozzi on a Rare Disease of the Parotid.—Dr. C. Gallozzi relates, in the *Giornale Inter. delle Scienze Med.*, No. 1, 1881, the case of a soldier, aged about forty, of strong and robust constitution, who had an enlargement in each parotid region. The swelling varied in size, and was reduced by pressure with the hand; but at the same time there appeared in the mouth, opposite the third molar tooth, a dense white pearly material, without odour, and of gummy consistence. The patient had been for several whole days exposed to cold and damp, when he began to have difficulty in mastication, so that he was able to take only soft food. The pain was relieved by the use of ointment of hemlock and iodide of potassium; but the swelling continued to increase whenever the jaws were much moved. The diagnosis was that the affection was a suppurative catarrh of the parenchyma of the parotid, originating in the primary acini of the gland. A cure was obtained under the prolonged internal use of iodide of potassium.

A. HENRY, M.D.

2. Negretto on the Radical Cure of Varicocele by Intravenous Injections of Chloral-Hydrate.—Dr. Angelo Negretto records (*Gaz. Med. Ital. Prov. Venete*, Jan. 14) two cases of varicocele, in which he succeeded in obtaining a speedy and permanent cure by intravenous injections of chloral-hydrate. In the first case, the patient was aged 28; the varicocele was situated on the left side, turgid, and painful. Dr. Negretto injected, with a Pravaz's syringe, in four different places, a solution of chloral-hydrate, of 7 grains to the ounce. At once, a small hard knot could be felt in the lumen of the vein. Within a few hours, a mild attack of orchitis supervened, which yielded readily to ordinary remedies. The injection was repeated in one or two other spots, with the same result of again inducing orchitis, which, however, was of the mildest possible type. Six days later, all visible traces, both of the operation and the varicocele, had disappeared. Along the course of the spermatic vein a few hard small and indolent nuclei could be felt, which corresponded to the seats of puncture. The author remarks that in this case the obliteration of a few branches of the spermatic vein had evidently been sufficient to effect a cure. The second case occurred in an individual aged 23, in whom varicocele had existed six years. In its leading features it resembled the preceding. Five injections were used, with the result of producing a clot in the vein, followed by slight orchitis, with severe pains radiating from the spermatic cord over the pelvis generally. A week after the last operation the cure was complete; and, as the patient never returned, the author believes it was permanent.

LITTON FORBES.

3. Gross on Carcinoma of the Breast.—At a recent meeting of the New York Academy of Medi-

cine (*New York Med. Gaz.*, Feb. 11, 1882), Dr. S. W. Gross read a paper on the influence of operations upon the prolongation of life and permanent recovery in carcinoma of the breast. From collected statistics and personal experience, the author is of opinion that life is often prolonged by operation, and that one case in fifteen is permanently cured. A single operation is not sufficient in all, or indeed in many, cases to secure these results. But repeated operations may be successful. For the operation itself, Gross recommends that the mamma be amputated, the skin dissected off the pectoral muscle, the tissues seared with the hot iron, the axillary space opened, and enlarged glands searched for and removed. Partial operations are worthless, and should be discarded. Death frequently occurs after operation from bad management of the axillary wound. In the discussion which ensued, in which many of the leading surgeons in New York took part, most of those who spoke agreed with the author that complete and repeated operations are sure to be successful in a certain, though small, proportion of cases.

HENRY T. BUTLIN.

4. Morton and others on Nerve-Stretching.—Dr. W. J. Morton read a paper at the New York Neurological Society (*New York Med. Record*, March 4, 1882), on nerve-stretching, and related the following cases: 1. Lateral sclerosis, both sciatics being stretched, with remarkable relief to all the symptoms; 2. Paralysis agitans, the left sciatic nerve being stretched with some improvement; 3. Arthrosis, in which the ulnar and median nerves were stretched, with resulting abolition of the continuous compound movements, but some numbness of the hand and an occasional twitch of the thumb persisted; 4. Chronic transverse myelitis, in which stretching of both sciatic nerves was followed by immediate return of sensation in both lower extremities and much improvement generally; but this was only temporary, and the final result was negative; 5. Idiopathic sciatica, in which the sciatic nerve was stretched, and the patient was cured; 6. Reflex epilepsy, in which fits could be induced at will by touching the right side of the neck and shoulder; stretching the brachial flexus had diminished the number of the fits. In the discussion which followed, Dr. Wyeth said he had stretched both sciatics in a case of locomotor ataxy, with relief to the pains, but no benefit to the gait or inco-ordination. Dr. Gerster related a similar case with the same result. Dr. Beard suggested that it might do good in writers' cramp. Dr. Hammond said stretching both sciatic nerves had failed in the case of a lady to afford any relief, even to the pains; but in sciatica, nerve-stretching gave excellent results. This might be done as Billroth has suggested, by flexing the thigh upon the pelvis, keeping the leg perfectly straight; and this plan would probably supplant that of cutting, except in the case of large and fat men. Dr. Dana said he had found that powerful traction (over seventy pounds), on both sciatics of a twelve-pound dog, failed to move the cord appreciably, so that he was unable to admit the cord itself was stretched, as thought by some; a similar experiment on the human subject gave the same result.

5. Thiersch on the Employment of Nerve-Stretching.—Professor Thiersch of Leipzig (*Boston Med. and Surg. Jour.*, No. 9, 1882) has published, through Dr. G. L. Walton, four cases of nerve-stretching for diseases of the spinal cord, without any beneficial result whatever. The first was a case of spastic paralysis; both sciatic nerves were stretched. The

second was a case of spinal paraplegia, in which both sciatics were stretched. The third and fourth were cases of tabes dorsalis, and it is specially noted that the pains were not in the slightest degree lessened, either in frequency or in intensity.

6. *Blum and others on Nerve-Stretching*.—M. Blum (*Le Prog. Méd.*, No. 11, 1882) has presented a note to the Société de Chirurgie on two cases of stretching of the sciatic nerve, one for obstinate neuralgia, with complete success, and the other time for ataxy with lightning pains, without much result. He sought the nerve at the inferior border of the gluteus maximus. M. Gillette preferred the incision in the middle third of the thigh. From forty-three experiments he had made at Bicêtre, he found that a force of 45 kilogrammes might be used without fear of producing rupture of the nerve, but this amount of force was unnecessary, 18 to 20 kilogrammes being sufficient. M. Berger announced that he had failed to obtain a good result by nerve-stretching in case of ataxy, but that he had had great success in a case of Parkinson's disease (paralysis agitans). M. Larger had obtained a partial result in a case of ataxy; he had pulled the nerve towards the periphery and towards the cord.

7. *Artaud and Gilson on Nerve-Stretching*.—MM. Artaud and Gilson (*Rev. de Chir.*, Feb. 1882) give the following conclusions as to the pathology of this operation. 1. The nerves are extensible; this extensibility diminishes from the centre to the periphery, and its limits correspond to those of the normal movements of the limbs. 2. The degree of resistance of the nerves being known, there is no reason to fear rupture of the nerve during elongation. 3. At the same time, it is advisable not to exceed a force of 40 kilogrammes (80 lbs.) for the sciatic, and 20 kilogrammes (40 lbs.) for the nerves of the upper extremity. 4. The lesions produced by stretching (at first subperineural ecchymosis and rupture of the nerve-fibres, later ascending degeneration,) are analogous to those produced by a partial section. 5. Stretching acts on the conductors of sensation, their functions being instantly suppressed; but it respects the conductors of motion. 6. It acts on the centres (phenomenon of transference of sensibility). 7. It may be accompanied by trophic disturbances, with or without persistent anæsthesia.

8. *Coppez on Nerve-Stretching for Facial Neuralgia*.—Dr. Coppez (*Ann. d'Oculistique*, Jan.-Feb. 1882) has published a case of infra-orbital neuralgia of twenty years' standing cured by nerve-stretching. The anæsthesia which resulted remained for eight days only. The patient was a man aged 51.

ROBERT SAUNDBY, M.D.

9. *Shrady on the Treatment of Fracture of the Patella by the Weight and Pulley*.—The *New York Med. Rec.* refers to two cases of fracture of the patella recently at the Presbyterian Hospital, under the care of Dr. Geo. F. Shrady, which were being treated by the weight and pulley. Both fractures were transverse, were occasioned, as usual, by muscular violence, and the fragments were separated three-fourths and one and one-fourth inch respectively. The limbs were elevated on a single inclined plane, and two strong broad bands of adhesive plaster were applied diagonally to the anterior portion of the thigh, crossing each other just above the patella, and embracing a pad at the upper margin of the upper fragment. These bands terminated in loops on each side of the leg, and were attached to stout cords which passed to a foot-piece and over a pulley to the weights. The lower fragment was

merely fixed by a bandage passed around the splint. Extension was made over the entire region of the quadriceps muscle, while the pad applied itself over the upper edge of the upper fragment, bringing it into apposition to the lower fragment. By these means the fragments were maintained in perfect apposition, without discomfort to the patient. Dr. Shrady prefers this method of treatment to any other that he has employed.

10. *Stevenson on Mosquito-Bites*.—Mr. Stevenson, of the Army Medical Department, says (*Edin. Med. Jour.*, Feb. 1882), regarding mosquito-bites, that the application which he has found most effectual is to smear the hands where bitten with a moist cake of soap, and allow the thin lather to dry into the skin. He has frequently resorted to this for relief, and has found that all itching and pain disappeared in ten or twelve minutes after the application was made, and did not again return. Besides being effectual, it has the advantage of being at hand and easy to use.

11. *Picard on Hot Water in Blennorrhæa*.—Dr. G. H. Picard of Topeka, Kansas (*Med. and Surg. Rep.*, Jan. 14, 1882), alleges that he has obtained very good results from the treatment of blennorrhæa with hot water in the following way. A small bulb-tipped catheter is inserted into the urethra, so that the bulbous extremity closes the mouth of the bladder. The free extremity of the catheter is connected by an India-rubber tube with an elevated vessel containing the hot water. The water finds egress through an opening between the small-sized catheter and the urethra. The temperature of the water should at first be about 90 deg. Fahr., gradually increased, with tolerance, to 100 deg. Fahr., or even to 115 deg. Fahr. Two sittings of at least fifteen minutes each are required. This treatment might be advantageously combined with local medication by medicating the water.

12. *Kretschmar on Aspiration of the Gall-Bladder*.—At a meeting of the Medical Society of the County of Kings (*Proceedings*, Sept. 1881), P. H. Kretschmar presented a paper on dilatation of the gall-bladder and its treatment by aspiration. He considered the use of the aspirator, in cases of enlarged and distended gall-bladder, perfectly safe, and, therefore, an operation that may be resorted to as soon as the diagnosis is made out, or one that may be utilised for the purpose of completing a diagnosis. He reported a case in which the patient was aspirated five times, and thirty-four and a half ounces of bile were removed within a month. At every operation the patient felt much relieved, and after the first operation the constitutional symptoms were much diminished in severity. Of course, this surgical interference did not take the place of, but only supplemented, the medical treatment of the case.

13. *Bouilly on Acute Mediastinitis after Excision of Hypertrophic Goutre*.—In November last, M. Bouilly of Paris reported to the Société de Chirurgie (*Rev. de Chir.*, No. 1, 1882) a case of simple hypertrophic goutre, of five years' growth, in a young woman who, for six months, had suffered from symptoms of compression on the side of the trachea, which were sufficiently pronounced to contraindicate interstitial injections of tincture of iodine. The tumour was of the size of an orange, and sent down a prolongation behind the sternum. On October 22, M. Bouilly removed the gland. An U-shaped incision was made along the upper margin of the sternum and the anterior margins of the sterno-mastoid muscles. The tumour had two

lateral prolongations, and one in the middle line, in close contact with the innominate veins. Some difficulty was experienced in dividing the close adhesions between the tumour and the trachea; the patient, however, lost but little blood during the operation. The wound was drained and dressed antiseptically. In the evening, the patient complained of pain and uneasiness behind the sternum. On the following day, this retrosternal pain increased, and descended towards the xiphoid appendage; and the patient suffered from dyspnoea. On the next day, there was very marked angina, the pulse was irregular, the heart-beats feeble and indistinct, and the respiration difficult and almost wholly diaphragmatic. The wound looked well, but the dressings had a fetid odour. Death took place sixty-five hours after the operation. At the necropsy, the raw surfaces of the wound were found covered by greyish pus, and behind the sternum was a diffused purulent deposit, extending to and covering the pericardium. This membrane presented marked changes on its surface, and its cavity contained a small collection of serous fluid. With the exception of some interstitial nephritis, there were no traces of any visceral disease. The removed thyroid tumour presented the characters of simple glandular hypertrophy. This was an instance of true diffused phlegmon of the anterior mediastinum, the characters of which affection, M. Bouilly states, have not hitherto been described. It commences suddenly, and usually follows some operation in the deep-sided parts of the cervical region. M. Bouilly has observed one other case after extirpation of a malignant tumour which had involved the deep-seated glands of the neck. In this instance, the first symptoms commenced on the same evening; death occurred at the end of the second day; and, after death, lesions similar to those of the first case were discovered. The principal symptoms of this affection consist in rapid elevation of temperature, very intense pain behind the sternum, which pain is increased during inspiration, an almost exclusively diaphragmatic respiration, dyspnoea, which is not to be accounted for by any auscultatory signs, slow cardiac pulsations, and a feeble and irregular pulse. The face becomes livid, the patient becomes very restless and uneasy, and finally death occurs, after algidity, delirium, and fall of temperature. This affection, M. Bouilly states, is analogous to the diffused pelvic cellulitis which is occasionally developed after certain operations on the rectum, and presents the characters of acute septicæmia. The cause of this terrible complication is probably to be found in the general condition of the patient. The patient, in one of M. Bouilly's cases, was a confirmed drinker; and the other was the subject of nephritis.

14. *Wölfler on the Influence of Esmarch's Bloodless Method on the Absorption of Fluids.*—From the results of experiments on animals with solutions of strychnia and ferro-cyanide of potassium, Dr. Anton Wölfler of Vienna has been led to the conclusion that, whilst any portion of a limb is constricted by Esmarch's elastic ligature, no fluid applied below the seat of constriction will be absorbed into the organism or even into the interior of the limb between the ligature and the extremity (Langenbeck's *Archiv*, Band xxvii, Heft 2). So long, then, as this ligature is in position, no poisonous action can be set up in the body by the absorption of carbolic acid or any other strong disinfecting fluid. The same rule, it is stated, applies to organic and septic fluids. On the other hand, immediately upon

removal of the ligature, absorption from any open surface on the limb will take place more rapidly than it would do under normal conditions. On these grounds, the author advocates the plan of retaining the constricting ligature in any operation on a limb until all visible vessels have been secured, and the final dressing has been applied, or, at least, until the raw surface has been washed over with an antiseptic solution.

15. *Wolff on Bloodless Operations.*—Dr. Julius Wolff of Berlin, in a recent communication on the arrest of hæmorrhage during and after surgical operations (Langenbeck's *Archiv*, Band xxvii, Heft 2), points out that most of the anticipated dangers of Esmarch's method do not really exist. No instances have yet been recorded of such results from its application as plethora of internal organs, cerebral apoplexy, local inflammation, thrombosis, or gangrene. When persistent paralysis is met with as a result of constriction of a large nerve, it is usually found that the elastic band or ligature is composed of unsuitable material, or that it has been improperly applied. The danger, in cases of supuration or sloughing, of putrid fluid, or unhealthy and softened tissue being driven into the circulatory system or the healthy structures, may be prevented by dispensing with the use of the elastic ligature, and by elevating the limb for a few minutes before applying the ligature. The most serious disadvantage attending Esmarch's method of constriction is the profuse parenchymatous bleeding, through temporary paralysis of the walls of the small vessels, which follows the removal of the constricting agent. Dr. Wolff describes the different attempts that have been made to prevent or guard against this result. In 1878, he proved that, during such operations on a limb as the removal of a sequestrum or the excision of a tumour, much blood would be saved by elevating this limb during the operation, and by its previous cooling through contact with moderately cooled air or water. He found that, by elevating the closed hand for a short time, he was able to lower its temperature by several degrees; and he stated that recent wounds, which, during elevation of the limb, remained almost quite dry, became at once flooded with blood after the limb had been laid in the horizontal position. After exposure of the upper extremity to air at a temperature of 42 deg. Fahr., or water at 48 deg. Fahr., such contraction of the small vessels results, it is stated, that, even when the arm is allowed to hang down, the thermometer grasped in the hand will not rise higher than 70 deg. Fahr., and the hand and forearm will remain pale and cold. In operations on limbs, including major amputations, Esmarch, after tying all large and visible arteries, applies a firm and constricting dressing, and then removes the ligature. König, after the large vessels have been secured, removes the ligature, elevates the limb, and then looks for the bleeding vessels before finally covering the wound or stump. Dr. Wolff advocates the plan of covering the extremity of the stump by firmly banded antiseptic dressings, after removal of the constricting ligature, and before the application of the sutures, and of retaining these dressings, with the limb elevated, for a period of fifteen or twenty minutes, and until the stage of vaso-motor paralysis has ceased. The end of the stump is then again exposed, and, after deligation of any vessels that may still bleed, the wound is drained, closed by sutures, and then dressed. Three cases of amputation in the thigh are recorded in which this method

was practised with success. The author recognises the objection on the score of too much delay in the operation, and of the necessity of keeping the patient under the influence of the anæsthetic for at least a quarter of an hour after the removal of a limb. It is pointed out, however, that very often after the removal of the constricting band in amputation, much time is taken up in looking for and securing a number of small but freely bleeding vessels.

16. *Jurasz on the Treatment of Excessive Deviation of the Nasal Septum.*—Professor Jurasz of Heidelberg, in a contribution to the *Berliner Klin. Woch.*, No. 4, 1882, discusses the treatment of those forms of deviation of the nasal septum in which the curvature is so pronounced as to cause occlusion of one or both nasal cavities, and thus to impair the smell, to prevent the discharge of secretion, and to interfere with speech and respiration. Curvature of the septum, even in its extreme forms, very rarely involves the osseous portion; those cases, of course, being excepted in which the deviation is the result of fracture. The cartilaginous septum is the usual seat of the anomaly, and especially the middle and posterior portions. The deviation is either single, the septum projecting on one side or the other, so as to form an occluding tumour, or it is double, the cartilage then forming a S-shaped curvature, so as to constrict or completely occlude both sides of the nose. The former instance would be one of single, and the latter one of double nasal atresia. In those very rare cases, in which the curvature affects the free margin and anterior portion of the cartilaginous septum, the best treatment consists in simple excision. The obstructing portion of the cartilage may be readily cut away, and the nasal cavity be thus laid open. In the more frequently observed cases of curvature of the middle and posterior portions of the cartilage, such treatment, on account of the depth of the affected parts, cannot be so easily applied. The author's plan of treatment, which has been carried out with success in two reported cases, is a modification of one proposed by Mr. Wm. Adams in 1875 (*Brit. Med. Jour.*, Oct. 2). The principle of the treatment adopted by Mr. Adams is this. Whilst the patient is under the influence of an anæsthetic, the bent cartilaginous septum is straightened by using a pair of strong forceps with flat parallel blades, and, after removal of the forceps, a retentive apparatus is inserted, consisting of a steel-screw compressor with two blades, one blade being introduced into each nostril. After this compressor has been worn continuously for two or three days, it is replaced by two ivory plugs, which can be introduced and removed by the patient at pleasure, both nostrils being thus kept moderately distended and support being given to the cartilaginous septum. Dr. Jurasz, holding that, immediately after the removal of the strong forceps by which the septum has been straightened, the cartilage, through its elasticity, at once returns to its former condition of curvature, recommends that the treatment be carried out in one stage; and, with this object, has devised a pair of forceps, the blades of which serve, in the first place, to straighten the septum, and, in the second place, as a compressor, which may be allowed to remain in the nostril for three days. With this instrument, after the septum has been forcibly straightened, the long handles can be detached and removed, leaving the constricting blades *in situ*. The operation is followed by much swelling of the nasal mucous membrane and by ulceration over what was the most

prominent portion of the cartilage; but, after recovery from these results, the septum, Dr. Jurasz says, will be found almost quite straight. The respiration will now be free, and all previous troubles, due to the deformity, will have ceased. Any tendency to relapse may be treated by the use of Mr. Adams's ivory plugs. W. JOHNSON SMITH.

17. *Subbotin on Treatment of Hemorrhoids by Forcible Dilatation of the Anus.*—Having referred to the dangers accompanying the usual methods of radical treatment of hemorrhoids, *i.e.*, excision, ligature, and cauterisation, Professor Subbotin (*Mejdu-narodnaia Clinica*, No. 1, 1882) advocates a fourth method, which is alleged to be entirely free of such dangers as subsequent pyæmia, stricture from the anus, secondary hæmorrhage, general peritonitis, etc. This operation is forcible dilatation of the anus and lower part of the rectum, recommended, about thirty years ago, by Maissonneuve, and, after many years of oblivion, in 1876-77, again introduced into practice by Verneuil and Fontan, and later by Guyon, Trélat, and other French surgeons. The author, from his own experience, draws attention to the simplicity, safety, rapidity of curative action, and efficiency of this method, which is described by him as follows. On the day before the operation, the bowels are thoroughly opened by a purgative; and, immediately before the dilatation, the rectum is washed out by an enema. The patient being brought under the influence of chloroform, and placed on his left side, with his thighs fully flexed, the operator stands behind the patient and introduces a bivalve Récamier's anal speculum. Then he gradually and cautiously opens the speculum (introduced down to its handle); and, when all the rugæ of the ano-rectal mucous membrane have been effaced by stretching, he leaves the instrument opened to its widest extent *in situ* for two or three minutes, and then removes it. With this action the treatment comes to an end, no after-treatment being required. The operation lasts about six to eight minutes. The immediate effects of the dilatation consist: 1. in a paretic state of both rectal sphincters, which exists three or four days, and then is followed by normal contraction of the parts; and 2, in complete relaxation or disappearance of the hæmorrhoid varices. Small piles usually disappear at once, never to return; large ones remain visible for some time after the operation as soft, lax, and empty capsules. These are gradually diminished, and, as a rule, finally disappear, or remain in the shape of simple polypi, causing no discomfort to the patient. According to the author, the action of dilatation in the treatment of hæmorrhoids is twofold. First, by relaxing the sphincters, it removes the cause of stagnation of blood in the beginnings of the hæmorrhoid veins; and, secondly, it expels the contents of the varices and compresses their walls in such a way as to cause their adhesion and obliteration of the cavity. Professor Subbotin points out only two contra-indications to forcible dilatation. They are, suppuration and incipient gangrene of the piles. In cases of highly tense and irreducible hæmorrhoids, he advises that the operation should be done in two stages: first, dilating by means of the fingers alone, and, some days later, proceeding with instrumental dilatation.

V. IDELSON, M.D.

18. *Symonds on a Case of Osteitis Deformans.*—Mr. C. J. Symonds records (*Guy's Hosp. Rep.*) a case of this disease. The patient, a married woman, was 69 years of age, and had been under Mr. Symonds's observation for six years. Her father had been de-

formed in the hands, but this was attributed to rheumatic gout; all other members of her family, including three daughters, had been free from any such affection as this patient suffered from. There was no history of tumour or syphilis either in the patient or her family. At the age of 48, and without premonitory symptoms, the left shin began to bulge forwards. Subsequently, the right leg became affected. At the age of 57, the right arm became very painful, and the left arm began to 'crook', but without much pain. The right hip became painful and prominent. At the age of 64, an ulcer formed on the left shin, and has increased continuously. The pain gradually ceased in the right arm. At the present time the patient is in fairly good health, and is possessed of considerable energy. The appearance of the deformed legs corresponds exactly with the illustrations accompanying Sir James Paget's paper in the *Med. Chir. Trans.*, vol. lx. There is restricted range of motion in the right hip-joint.

E. NOBLE SMITH.

19. *Harrison on the Radical Cure of Varicocele.*—Mr. Reginald Harrison, in the *Lancet*, March 1882, p. 477, describes the mode of operating in varicocele, which has given him very satisfactory results. The spermatic cord is exposed by a vertical incision, about an inch in length, and the veins, being carefully separated, each is tied in two places with a catgut ligature. Usually, three or four large veins are thus dealt with, and the bundles of smaller veins are obliterated by a few touches of the thermo-cautery. The operation is conducted antiseptically, and no sutures are used.

20. *Bond upon Death after Operation for the Relief of Strangulated Hernia.*—Mr. C. J. Bond, in the *Lancet*, March 1882, p. 478, reports a case well illustrating Sir J. Paget's observations, that death, following operations for strangulated hernia, is mainly due to the fact that the injured bowel fails to recover its normal condition, and hence the great value of early operations. In Mr. Bond's case, a woman with strangulated umbilical hernia was operated upon three days after symptoms of strangulation had set in. The relief at first appeared marked, but in half an hour diarrhoea set in, with vomiting, and the patient died exhausted within twelve hours of the operation. At the *post mortem* examination, a piece of small intestine, three or four inches in length, lying near the umbilical opening, was purple in colour, very injected, but still smooth on its peritoneal aspect, not covered with lymph or bound to neighbouring parts. On opening it, and washing away some grey sloughy tissue, the mucous membrane was found to be grey and sloughing, and in some places, especially at the site of the constriction, eroded into ragged ulcers. The summits of the valvulae conniventes were also, in some places, ulcerated away. In successful cases of operation for strangulated hernia, the bowels often do not act for some days, while diarrhoea is generally associated with a fatal termination, and is due to the paralysed condition of the bowel, which leads to its own destruction.

21. *Heath on Fractured Patella.*—Mr. Christopher Heath, in the *Brit. Med. Jour.*, March 1882, p. 422, directs attention to a new method of treating this accident, and one which has, in his hands, yielded good results. The effused blood and serum is at once removed by aspiration, and a plaster-of-Paris bandage put on over cotton wool, and the patient allowed to get about as soon as the plaster is dry. By this method the muscles do not lose their tone,

being constantly exercised, and ligamentous union is secured, which is far more satisfactory, in most cases, than so-called bony union.

RICHARD NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

1. VIBERT.—The Possibility of distinguishing Human Blood from that of other Mammals. (*Arch. de Phys.*, Jan. 1882.)
2. RICHARD.—The Parasite of Malaria. (*Comptes Rendus de l'Acad. des Sciences.*)
3. DÉJÉRINE.—The Degeneration of the Cutaneous Nerves in Locomotor Ataxy, and its Influence on the Disturbances of Cutaneous Sensibility in that Disease. (*Bul. de la Soc. de Biologie.*)
4. KEY, ROSSANDER, and BRUZELIUS.—A Case of Septicæmia. (*Nord. Med. Arkiv*, Band xiii.)
5. TILLMANNS.—Communication of the Gastro-Intestinal Tract with the Thorax: Subphrenic Fæcal Abscess. (*Archiv. für Klin. Chir.*, Band xxv.)
6. DE GIOVANNI.—Researches on the Inflammatory Process. (*Gaz. Med. Ital. Prov. Venete*, Jan. 14, 1882.)
7. MEGNIN.—Pernicious Anæmia in Dogs. (*Ibid.*, No. 11, 1882.)
8. WOOD.—The Contagium of Diphtheria. (*Phil. Med. Times*, Oct. 22, 1881.)
9. GARRIGUES.—Cyst of the Pancreas. (*New York Med. Rec.*, March 1882.)
10. KLIPPEL.—Rupture of the Heart. (*Le Prog. Méd.*, No. 9, 1882.)
11. SCHOFF.—Tænia Cucumbrina Ellipticæ. (*Wiener Med. Blätter*, No. 52, 1881.)
12. SKABICHEVSKY, V. T.—Pathological Changes in the Sympathetic Nervous System in Cases of Phthisis. (*Vratch*, 1882, No. 2, pp. 17-20.)
13. KOLESNIKOFF.—Pathological Changes in the Brain and the Spinal Cord in Rabid Dogs. (*Arch. Vet. Nauk.*, December 1881.)
14. BROWN-SÉQUARD.—Post Mortem Spasm. (*Gaz. Hebdom. de Méd.*, Nov. 25, 1881.)

1. *Vibert on the Possibility of Distinguishing Human Blood from that of other Mammals.*—Vibert (*Arch. de Physiologie*, Jan. 1882) says that medical experts are often called upon to decide whether blood-spots contain human blood. It is impossible to affirm that a blood-spot is one of human blood; all that can safely be asserted is that it is possible to be human blood. Sometimes it can be indisputably proved that a blood-spot contains blood other than that of man. When this distinction can be made, it is owing to the fact that the animal, the blood of which has caused the stain, belongs to a species in which the blood-corpuscles are smaller than those of man. To arrive at this decision, the examination must be made under the most favourable conditions.

2. *Richard on the Parasite of Malaria.*—M. Richard (*Comptes Rendus des Séances de l'Académie des Sciences*) acknowledges that the new details he is able to give concerning the microphyte of malaria are the result of experiments made at the Philippeville Hospital, similar to those made by M. Laveran, who has recently called attention to the presence of a microphyte (which he names *oscillaria malarie*) in the blood of patients suffering from paludal poisoning. M. Richard affirms that this microphyte has a special habitat—the red blood-corpuscle, where it develops: it quits the corpuscle on arriving at the adult state. On examining the blood of patients on

the eve of an attack, it is observed that there is a round clear spot in the body of the red corpuscles. There are also to be seen other corpuscles in which the evolution of the microphyte is more advanced; the clear spot is larger, and tightly enclosed in a circle of small black granules. The hæmoglobine, easily recognised by its greenish colour, forms a ring which becomes smaller and smaller as the parasite increases in size. Finally, the hæmoglobine disappears entirely, and the red corpuscle is reduced to a shell occupied by the microphyte. In the adult stage, the microphyte of malaria resembles a collar formed of black granulations. It possesses several excessively thin projections, measuring 25 micromillimètres (the thousandth part of a millimètre) in length, sometimes more. The parasite breaks through the membrane and passes into the plasma of the blood; sometimes the filaments only break through the membrane, and the body of the parasite is imprisoned in the corpuscle. In either case, the microphyte executes movements comparable to that of a rod when held by the thick end and shaken. In the course of their movements they whip together the neighbouring red corpuscles. Sometimes their free extremity, which is slightly bulging, is easily caught in the meshes of the fibrinous network; then the body of the parasite oscillates simultaneously with the filaments which move with increasing rapidity, as though it tried to free itself. In about an hour, the movements cease, and the parasite remains deprived of all vitality. This curious phenomenon, presented by the vibrations, is not always observed; generally the parasite remains inert. The vibrations are more likely to occur in the more advanced states of development. The red corpuscles, with very small parasites, never present any movements. The corpuscles containing parasites slowly spread out and change in form; the pigmentary collarette breaks up; the pigment-granules thus liberated are quickly brought back to the blood by the leucocytes which become impregnated with them. M. Richard energetically asserts that melanæmia of the leucocytes is not a primary phenomenon, but a secondary one, the original and essential alteration taking place in the red corpuscles. M. Richard considers that there are many physico-pathological deductions to be drawn from his researches, but restricts himself to the following example. An attack of the pernicious comatose form of malarial fever has its origin in an obstruction of the cerebral capillaries. This obstruction is caused by small masses of elements containing collars of black granules, which clearly indicate the presence of the microphyte already described. The red corpuscles lose all their elasticity and become viscous; thus they circulate with difficulty in the minute capillaries, which easily become obstructed. A few viscous non-elastic corpuscles suffice. In the pernicious form of paludal fever, they are found in considerable quantities.

3. *Déjérine on the Degeneration of Cutaneous Nerves in Locomotor Ataxy, and the part played by it in the Sensory Cutaneous Derangement observed in this Affection.*—M. Déjérine (*Bull. de la Soc. de Biologie*) believes that the different degrees of cutaneous sensibility remarked in locomotor ataxy, most generally depend on the extent of the degeneration existing in the cutaneous nerves of the region affected. *Post mortem* examinations bring to light but slight alterations in the spinal cord, and the posterior roots present the usual degree of atrophy. This is observed in cases where the patients, during life, presented exaggerated cutaneous sensory de-

range. The cutaneous nerves of the zones of anæsthesia, removed in the usual way, afterwards treated by osmic acid and picrocarmine, on microscopic examination showed marked nervous degeneration, altogether comparable to that which existed in the posterior roots of the spinal cord of the same patient. Numerous empty sheaths were observed presenting the usual histological features; there being very few healthy tubes, two or three only in a section, sometimes, though rarely, a tube in process of degeneration.

W. VIGNAL.

4. *Key, Rossander, and Bruzelius on a case of Septicæmia.*—A case presenting peculiar characters is reported in *Hygiea* for 1880 (*Nord. Med. Arkiv*, Band xiii, Häft 4). A man, aged 65, on the night of October 23rd, raised himself on his knees, in bed, to pass urine. He overbalanced himself and fell on the chamber-vessel, which broke, inflicting upon him some superficial abrasions of the face, and a transverse wound of the neck, three inches long. He lay down and slept. On his rising, at eight o'clock the next morning, considerable hæmorrhage occurred, which was arrested by a barber by means of compression. Dr. Rossander, who was called in, disinfected the wound and the surrounding parts with a five per cent. solution of carbolic acid, and applied catgut sutures and Lister's dressing. Two days later, suppuration having commenced in the wound, some of the sutures were removed. Two days after that, carbolic eczema appeared, and a dressing of salicylic acid was substituted. For some days the patient did well, and on the seventh and eighth days was able to go out for an hour. The wound suppurated moderately at each angle; there was some redness around, but no erysipelas. On November 1 the patient had a rigor; so slight, however, that he did not mention it, although questioned. On the 2nd, it recurred, and he had pain in the back and some dyspnoea, and felt very ill. On November 3rd, he was worse; the urine was found to contain albumen. Herr Bruzelius, who had been his medical attendant for eight years, now saw him. He had constantly found small quantities of albumen in the patient's urine, but no tube-casts; and he the more readily assumed the presence of an ordinary acute nephritis, as the appearance of the wound did not present anything remarkable. The next day, however, swelling and tenderness of the joints of the feet and of one of the hands appeared. The patient died on November 5th, fourteen days after receiving the injury. The body having been prepared with carbolic acid, a necropsy was made by Dr. Axel Key. The wound was healed only in the centre; there was a small cavity at the upper third, but no trace of purulent infiltration; nor was there any burrowing of pus in connection with the lower third. The skin, for about five centimètres around, was of a purple colour, and the epidermis was loosened in parts. The kidneys showed, besides a very slight amount of contraction, very acute parenchymatous nephritis; the spleen was enlarged and soft. On the other hand, there was found in the above-mentioned joints, the parts around which were free, a small quantity of grumous sero-purulent fluid. This was removed for immediate examination, and was found to contain, besides lymphoid cells, a very great abundance of bacteria, partly isolated micrococci, partly diplococci and streptococci, the latter in great number. Careful examination failed to detect any other form of bacteria. Bacterial emboli were also found in the lungs and kidneys, without any surrounding deposits of pus.

A. HENRY, M.D.

6. *De Giovanni on the Inflammatory Process.*—In a long and exhaustive article in the *Gaz. Med. Ital. Prov. Venete*, Jan. 14, 1882, Professor De Giovanni enunciates the following doctrines relative to the process of inflammation, some of which, it will be noticed, differ considerably from received teachings. 1. In the mechanism of inflammation, the capillaries play a chief part. 2. The 'cellular theory', as maintained by some, is quite inadequate to explain the phenomena of inflammation. 3. Diapedesis, as a means of accounting for inflammatory effusion, the author cannot recognise; if it be a fact at all, it is a comparatively unimportant one in the chain of physiological events. 4. The 'protoplasmic' theory is much more in accordance with recognised facts. 5. According to the author, the inflammatory process consists of the following factors: retardation of the circulation, with stasis in the capillaries; protoplasmic movements in these vessels; hæmorrhage by solution of continuity; and diffusion of the plasma of the blood, followed by the evolution of formative elements in the latter.

LITTON FORBES.

7. *Megnín on Pernicious Anæmia in Dogs.*—M. Megnin (*Le Prog. Méd.*, 1882, No. 11) reports that, in the disease called epidemic bleeding of the nose of dogs, there is chronic inflammation of the mucous membrane of the small intestine and cæcum, in which the membrane and its villousities are thickened and reddened. These lesions alone would explain the anæmia, but they are produced by the bites of numerous worms of the orders *Ankylostomum* and *Trichocephalus*. He has found the same disease in the cat. The name given above is due to the frequent but constant discharge of a sero-sanguinolent fluid from the nostrils.

8. *Wood on the Contagium of Diphtheria.*—Dr. Wood (*Philadelphia Med. Times*, Oct. 22, 1881) has found an organism in the blood of diphtheritic patients, free in the serum and contained within the leucocytes, which, on cultivation, causes diphtheria when introduced into the bodies of animals. This micrococcus differs from that which may be found in ordinary angina, simply by the activity of its reproduction.

9. *Garrigues on Cyst of the Pancreas.*—Dr. H. J. Garrigues (*New York Med. Record*, March 18, 1882) reports a case of cyst of the pancreas, removed by Dr. Bozeman from a living woman. It weighed twenty pounds and a-half, and contained two gallons and a half of fluid. Its wall was 2 or 3 millimètres thick, and covered with flattened epithelium; it was lined with very narrow columnar epithelium, and the inner surface showed the formation of secondary cysts, similar to what may be seen in ovarian cysts. The fluid was yellowish-grey, viscid, acid, and of specific gravity 1020. It did not coagulate on standing, but did so abundantly on heating. It contained compound granular corpuscles, small nuclei, epithelial flakes, and shreds of the bodies of epithelial cells.

10. *Klippel on Rupture of the Heart.*—M. Klippel (*Le Prog. Méd.*, 1882, No. 9) has published two cases of spontaneous rupture of the heart, in both cases in old women, aged respectively 59 and 77. In both, the rupture was in the anterior wall of the left ventricle near the apex. The coronary arteries were atheromatous and thrombosed. He suggests that the sequence of events was, first, degeneration of the parts supplied by the obstructed vessel, and then rupture of the altered myocardium.

ROBERT SAUNDBY, M.D.

11. *Schoff on the Tænia Cucumerina Elliptica.*—Schoff reports a case in which he met with this rare form of tænia (*Wiener Med. Blätter*, No. 52, 1881). It is 20 centimètres long, has a rostrum with sixty hooks arranged in several rows, proglottides 2 millimètres broad, and two sexual openings. This cysticercus lives in the trichodectes canis (dog-louse); and infection occurs through the tongue of the dog, or by children stroking the dogs and afterwards sucking their fingers. The patient was a girl seven months old.

F. WILLIAM ELSNER.

12. *Skabichevski on Changes in the Sympathetic Nervous System in Phthisis.*—Dr. Skabichevsky (*Vratch*, No. 2, 1882), at the suggestion of Professor V. A. Manassein (who is of opinion that the development of phthisis, in some cases, may depend upon certain primary lesions in the nervous apparatus of the lung), has undertaken the examination of the cervical ganglia and trunks of the sympathetic nerve in phthisical subjects. Sixteen cases have been carefully examined, in thirteen of which the phthisical lesions were bilateral, and in three unilateral. In all his cases, the author found chronic inflammation both of the trunks and of the ganglia of the sympathetic, which led to the development of connective tissue, to the compression of nervous elements, and to their subsequent atrophy with pigmentation and fatty degeneration of nerve-cells. In more acute cases, the sympathetic cervical ganglia and nerve-trunks appeared rather enlarged and injected. Microscopical examination detected the high development of plexus of greatly dilated blood-vessels, which were densely overcrowded with red blood-cells and encircled by abundant collections of leucocytes. The adventitia was thickened. The epithelioid covering of the capsules of nerve-cells was swollen, and presented all the phenomena of proliferation. Some nerve-cells preserved their natural shape and size, but others became opaque and granular; others, again, were diminished in volume, and their protoplasm contained highly lustrous, brownish-yellow granules. The nerve-fasciculi showed similar hyperæmia, and accumulation of round and fusiform leucocytoid cells in the interfibrillar connective tissue. The nerve-fibres were swollen, rather opaque; some of them had a bead-like appearance; the myeline covering of others was coagulated, and consisted of highly refractive drops of various size. In more chronic cases of phthisis, the author found an enormous development of dilated blood-vessels. The nerve-cells were very small, and situated at a considerable distance from each other; many of them had lost their nuclei; almost all had, partially or wholly, undergone brownish-yellow pigmentation. The external membrane (with its interne processes) of the ganglia, the external capsule of the ganglionic nerve-cells, the neurilemma of the nerve-fibres, and the tunica adventitia of the blood-vessels, were all greatly thickened. The author invariably found such changes more intensely developed in the inferior cervical ganglion than in the superior. In cases of unilateral phthisical affection, the lesions of the sympathetic on the healthy side were but slight. The author concludes that the sympathetic lesions are secondary, and spread from a primary focus in the form of diseased bronchial lymphatic glands. The latter were found degenerated in all the cases investigated. They invariably presented swelling, caseation, pigmentation, thickening of their capsules, and of the adjacent cellular tissue. The author thinks it possible that the sym-

pathetic ganglia affected in this way may, in their turn, determine certain 'trophic' changes in the lungs. Possibly, also, he thinks the well-known phenomena of sharply defined red spots on the cheeks of phthisical subjects, the sudden disappearance of redness, and the equally sudden paleness of the face, the tendency to facial perspiration, and other similar sympathetic symptoms, are really due to the above-mentioned pathological changes in the ganglia of the sympathetic nerve. [If we are not greatly mistaken, Dr. Skabichevsky is the first who has undertaken the investigation of the state of the sympathetic system in phthisis; at all events, Russian medical literature does not contain either other similar contributions, or even a reference to any foreign work of such kind. Lately, Dr. S. D. Kosturin has investigated the pneumogastric nerve in phthisis, and has shown that neuritis vagi is a constant phenomenon in this affection (see Professor Manassein's *Archiv*, Series ii.)—*Rep.*]

13. *Kolesnikoff on Changes in the Brain and the Spinal Cord in Rabies.*—Professor Kolesnikoff (*Arch. of Veterin. Med.*, Dec. 1881), after prolonged researches, arrives at the conclusion that the changes in rabies affect mainly the cerebral and spinal blood-vessels, and consist in dilatation of the latter, with leucocytic infiltration of the walls, and circumvascular and periganglionic accumulation of leucocytes. In course of time, the exudation is transformed into hyaloid opaque masses, which, later, undergo gelatinous or pigmentary degeneration. Besides, within the substance of the walls, there are to be seen 'protoplasmatic bodies' enclosing red blood-corpuscles and granules of blood-pigment. Such changes are, according to the author, more intense in and about the walls of veins than in arterioles. Topographically, they are most intense in the corpora striata, the optic thalami, the pons Varolii, the medulla oblongata, and the spinal cord in and around the nuclei of the seventh, eighth, ninth, tenth, and twelfth cerebral nerves. [In other words, the author's investigations tend generally to confirm the results published by Netten Radcliffe, Allbutt, Hammond, Benedikt, Friedberger and Putz, J. Coats, Dunlop and Patterson, Gowers, Wassilief, Huguenin, and O. Weller. Professor Kolesnikoff was the first investigator who (*Centralb. für Med. Wiss.*, 1875) observed the formation of diaphanous masses within the blood-vessels in lyssa, and proved the direct connection between these 'shining thrombi' and hyaloid bodies outside the vessels.—*Rep.*]

V. IDELSON, M.D.

14. *Brown-Séquard on 'Post Mortem' Spasm.*—Brown-Séquard describes a form of *post mortem* spasm, or contraction of the voluntary muscles, distinct from rigor mortis. (*Gaz. Hebdom. de Méd.*, Nov. 25, 1881 and 1882, pp. 6 and 43.) This form of contraction may be produced by lesions of the cerebellum. It rapidly disappears, and is followed by speedy putrefaction. Sometimes it appears *ante mortem*, and continues for a short time *post mortem*. After its disappearance, true rigor mortis may set in.

THOS. STEVENSON, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

I. BARANSKI.—Prolonged Interval between the Birth of Twins. (*Four. de Méd. de Paris*, April 22, 1882.)

2. HERRGOTT.—Podalic Version. (*Ann. de Gynéc.*, April 1882.)

3. KLEINWACHTER.—A Case of Fibromyoma [Complicating Pregnancy. (*Prager Med. Woch.*, No. 9, 1882.)

4. LEFOUR.—A Case of Double Cephalhæmatoma. (Bordeaux, 1881.)

5. PASCHAL, F.—Abdominal Pregnancy of Ten Years' Duration. (*Obstet. Gaz.*, Cincinnati, March 1882.)

6. PIASECKI.—On the Influence of Tobacco Manufacture on Menstruation, Pregnancy, and New-born Children. (*Ann. de Gynéc.*, April 1882.)

7. REHFELDT.—On the Disinfection of the Puerperal Uterus by means of Iodoform. (*Berl. Klin. Woch.*, No. 9, 1882.)

8. SCHÜCKING, A.—On Iodoform and Permanent Irrigation. (*Centralb. für Gynäk.*, den 1 April 1882.)

9. SINCLAIR, A. D.—Subinvolution of the Uterus. (*Boston Med. and Surg. Jour.*, April 13, 1882.)

10. STUDLEY, W. H.—The Mechanism of Forceps Labour and the Principles of Forceps-Construction. (*Amer. Jour. of Med. Sciences*, Jan. 1882.)

11. TATE, J. H.—Submucous Fibroids of the Uterus. (*Obstet. Gaz.*, March 1882.)

12. WING, C. E.—The Diagnosis of Uterine Ante-flexions and Anteversions. (*Boston Med. and Surg. Jour.*, Feb. 1882.)

13. WOLCZYNSKI.—A Case of Annular Stenosis of the Vagina in a Multipara. (*Centralb. für Gynäk.*, April 22, 1882.)

14. RUSANOVSKY, M.—On Le Bon's Method for the Treatment of Stillborn Infants. (*Vratch*, 1882, No. 1, pp. 10-11.)

15. LEBEDEFF, M.—Hot-Water Injections in Obstetrical and Gynæcological Practice. (*Vratch*, No. 3, 1882, pp. 44-46.)

1. *Baranski on a Case of Prolonged Interval between the Births of Twins.*—The patient was delivered naturally of a male child a little before term. The placenta followed in a few minutes. Feeling quite well, the woman returned to her work in the fields. One day whilst thus working, seventeen days after the birth of the first child, she felt an escape of a large quantity of amniotic fluid, but without any pain. Dr. Baranski, who was at once sent for, found an arm presenting, and delivered a child without any trace of maceration, and well-developed. The placenta followed in a few minutes.

5. *Paschal on Abdominal Pregnancy.*—In August 1881, a Mexican woman rode eighty miles on horseback to consult Dr. Paschal, and asked to be treated for 'diarrhoea'. After a few questions, she handed Dr. Paschal the femur, scapula, and two other bones of a fetus of about nine months. He then obtained the following history. She was thirty years old, and married at the age of fifteen. Five years after her marriage she became pregnant for the first time, and went, as she supposed, to full term. She noticed nothing unusual during gestation, except great difficulty in resting in the recumbent position. About the time that she should have been confined, pains came on, not severe in character, which lasted four days. They ceased, and shortly afterwards she commenced failing in health. She had had abdominal pains, chills, fevers, sweats, loss of appetite, vomiting and diarrhoea. A year afterwards her menses returned. She menstruated regularly since, and the size of the abdomen gradually decreased. In May 1881, ten years after her expected confinement, she expelled by the rectum one-half of the inferior maxilla; from then until August she had collected four bones. At the time she consulted Dr. Paschal, her general condition was bad. She was emaciated, suffered abdominal pains,

had fever and diarrhoea; pulse ranged from 100 to 120, temperature 100 deg. to 101 deg. Inspection showed the abdomen to be enlarged; a hard tumour could be plainly made out, situated between the pubes and umbilicus. On vaginal examination the womb was found to be normal; the bones could be distinctly felt through the *cul-de-sac*; the bladder was uninjured. By rectal examination, an opening about the size of a silver dollar was found to exist three inches from the anus. The denuded bones were easily reached, and the cranial bones 'presented'. Two days after this examination she was placed under chloroform, and with a forceps, aided by the fingers, Dr. Paschal removed without enlarging the opening, one-half of the frontal bone, one parietal and several ribs. She suffered no bad consequences, and eight days after she was again chloroformed, and the occipital, temporals, and several long bones removed. During a period of eight days after the last operation, she passed one hundred and twenty-two bones. After an interval of fifteen days, the remaining half of the frontal bone, and all others that could be found in the cyst, were removed. She improved rapidly in health. The tumour could no longer be felt; diarrhoea ceased, and one month after the operation she returned home completely restored. In all, two hundred and fifty bones were collected.

6. *Piasecki on the influence of Tobacco on Menstruation and Pregnancy.*—Dr. Piasecki draws the following conclusions from an examination of 540 women employed in the tobacco-manufacture at Havre, with reference to the influence of tobacco on their generative functions. 1. Tobacco cannot be regarded as an emmenagogue. 2. The various labours to which the fabrication of cigars, etc., give rise, produce no unfavourable influence on the work-women. 3. It has no injurious influence on pregnancy. 4. Abortions are not more common among the work-girls of the manufactory of tobacco at Havre, than among other women in the town. The cigar-girls, who are more sedentary in their habits, are those chiefly affected by miscarriages. 5. The mortality among the new-born children was considerable, 233 deaths in 376 births. These deaths did not depend, however, upon the employment of the mothers, but on the general unsanitary conditions by which they were surrounded.

7. *Rehfeldt on Iodoform in the Puerperium.*—The author was called, on the fourth day after a normal labour, to a patient with putrid endometritis. The patient improved with carbolic injections; but as it was impossible to maintain permanent irrigation, Dr. Rehfeldt determined to use iodoform. After the uterus had been carefully washed out with a 2 per cent. carbolic solution, he applied 5 grains of iodoform to the uterine cavity. The lochia became normal, the pulse and temperature fell, although not down to the normal, on account of several abscesses which had arisen from the continued dorsal decubitus. Convalescence rapidly progressed as soon as the abscesses healed.

10. *Studley on Mechanism of Forceps Labour.*—Dr. Studley has devised an instrument which possesses the following characteristics. 1. The blades are of more than the ordinary width, and possess a more decided concavity, both transversely and longitudinally. They are thereby enabled to grasp the head with a hug, which is distributed generally and evenly over the cranial surface, from their tips to their junction with their shanks, by which means an undue pressure on any one point is

avoided; an upward or downward tendency to glide from the cranial convexity is prevented; their central rotatory action on the sides of the head as pivotal points is guarded against; and lastly, the muscular perception is greatly conduced to by the firmer bearing of the handles, indicating thereby the course which the head is naturally pursuing. 2. The proximal ends of the blades and the shanks are stiffer than in the great majority of forceps. They are such as to allow almost no separation within the bounds of any reasonable traction. Limber forceps are simply barbarous. They not only do no good, but they slip off, and bruise the head and lacerate the perinæum; and if by the prudence of the obstetrician they be prevented from doing this, they slip just far enough to concentrate all the bearing or pressure on the tips of the blades, and thus convert them into gouging or cutting instruments. The binding-screw is in all essential respects the same as Tarnier's, and hence needs no comment.

12. *Wing on the Diagnosis of Antelexions and Anteversions.*—The author states that the different opinions held by authorities on the value of pessaries in the treatment of antelexions, is explained by errors in diagnosis or want of precision in diagnosis. The antelexion of one gynaecologist, which he finds but rarely, and then has but little success in treating, is a very different thing from the antelexion of his neighbour, who diagnosticates these displacements very often, and easily relieves the great majority of them by the use of pessaries of one kind or another. Most of the anteversion-pessaries are supposed to force the fundus up towards its normal position by pressure exerted through the anterior vaginal wall upon it. But the tender bladder is in the way, lying between this anterior vaginal wall and the uterus in such cases; and it is nonsense to talk of exerting enough steady pressure upon the anterior vaginal wall to force the fundus into position, when such pressure must act through the bladder, which, as the rule with such displacements, is already irritable. When any good results are accomplished by this class of supporters, it is probably because they put the anterior vaginal wall upon the stretch, and lifting it somewhat, they must also lift in a measure the womb to which it is firmly attached at the cervix; but the same result can be better brought about by a common lever pessary, properly adjusted.

FANCOURT BARNES, M.D.

14. *Rusanovsky on Le Bon's Method for the Treatment of Stillborn Infants.*—Dr. Rusanovsky (*Vratch*, 1882, No. 1) relates a very interesting and instructive case of asphyxia neonatorum, in which, after entirely unsuccessful application of the usual methods (including Schultze's), he resolved, *in extremis*, to try hot water treatment, lately recommended for still-birth by Dr. Le Bon. As there was no bath at hand, the author took a common iron pail, filled it with very hot water, and at once immersed the infant (who was pulseless and cold), leaving free the head alone. One minute afterwards—eighty-seven minutes after birth—the first inspiration was made, and the child's life was saved. The author points out that Le Bon's method is exceedingly simple, easy, conveniently practicable under all circumstances, and does not fatigue the obstetrician. As to the *rationale* of the method, the author is of opinion that the first inspiratory movement results from the powerful exciting influence produced by hot water upon the peripheric nerves of the skin, and from the subsequent reflex action of the respiratory centre in the medulla oblongata.

15. *Lebedeff on Hot Water Injections in Obstetrical and Gynecological Practice.*—Dr. Lebedeff (*Vratch*, 1882, No. 3), gives his experience of six years' use of hot injections, which found in him a very enthusiastic advocate. He says that they are indicated; 1. in cases of uterine hæmorrhage of all kinds; 2. cases of subinvolution of the uterus whenever they are detected in the puerperal period; or later; 3. in chronic metritis; 4. in chronic inflammatory exudations in the neighbourhood of the uterus; 5. in acute inflammations of the uterus and the adjacent tissues, excluding the ovaries. [According to the author, vaginal injections of hot water are not only entirely useless in cases of acute oöphoritis, but they even increase the ovarian pain and swelling.] In cases of *post partum* hæmorrhage, the author generally used vaginal or intrauterine injections of water, at 35 deg. to 38 deg. Reaumur (110.75 to 117.5 Fahr.). As a rule, one or two Esmarch's cans were sufficient to stop at once even very profuse flooding. Only very stout patients, who were rather insensitive to high temperatures, or who previously had been affected with chronic inflammation of the uterus, accompanied with menorrhagia, required the use of water at about 40 deg. Reaumur (122 Fahr.), and the repetition of injections every half-an-hour four or five times successively. In cases of abortion, Dr. Lebedeff administered injections every two hours, adding to the water some carbolic acid. As a means of exciting uterine contraction after labour, hot injections proved to be the best remedy the author ever knew. They were equally successful in subinvolution of the uterus beyond the puerperal period. After one or two weeks' use of hot water, two or three times daily, the dragging pelvic and lumbar pains disappeared, and then the leucorrhœal discharge and metrorrhagia or menorrhagia gradually diminished, and finally stopped. Less striking results were obtained by the author in cases of chronic metritis, in which he, differing from Dr. E. P. Dudley, saw only some slight decrease of the leucorrhœa and pains. Dr. Lebedeff most ardently praises hot vaginal douches as a means of producing rapid absorption of inflammatory products in chronic cases of pelvic cellulitis and in acute cases of peri- and parametritis and metritis, in which he used injections as hot as 38 to 40 deg. Reaumur (117.5 to 122 Fahr.), repeating them every two hours for some days. [He practised them much in the same manner as was recommended by Dr. Emmet, and described by Dr. Wing in an instructive paper in the LONDON MEDICAL RECORD, December 1880, p. 479.—*Rep.*]

V. IDELSON, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1. FRIEDRICH.—On Myoclonus Multiplex. (*Berliner Klin. Woch.*, No. 26, 1881.)
2. JOLLY.—On Changes in the Weight of the Body after Epileptic Fits. (*Ibid.*)
3. BAUMGÄRTNER.—On Epileptic Attacks during Chloroform-Narcotism. (*Ibid.*)
4. D'OLIER.—On the Co-existence of Hysteria and Epilepsy. (*Annales Médico-Psychol.*, Sept. 1881.)
5. CLARK, DANIEL.—Brain-Lesions and Functional Results. (*Amer. Jour. of Insanity*, Jan. 1881.)
6. ECHEVERRIA, M.—Note on Feigned Epilepsy. (*Ibid.*)

7. MICKLE, W. J.—Cerebral Localisation: Illustrated by a Case of Brain-Injury. (*Four. of Mental Science*, April 1881.)
8. MACLEOD, M. D.—Cases of Choreic Convulsions in Persons of Advanced Age. (*Ibid.*, July 1881.)
9. MCDOWALL, T. W.—Chorea in an Aged Person. (*Ibid.*)
10. ORMEROD, J. A.—On the Diagnostic Symptoms of Tabes Dorsalis, with Cases. (*St. Barthol. Hosp. Reports*, vol. xvii.)
11. ORMEROD, J. A.—Tendon-Reflex in the Later Stages of Hemiplegia. (*Ibid.*)
12. MORTON, CHARLES A.—Two Cases of Subacute Anterior Spinal Paralysis, with the Pathological Changes in the Spinal Cord in one of the Cases. (*Ibid.*)
13. GEE, SAMUEL.—Two Cases of Cerebral Disease. (*Ibid.*)
14. CURWEN, JOHN.—Rest in Nervous Diseases. (*Alienist and Neurol.*, St. Louis, July 1881.)
15. CLARK, C. W.—A Case of Consciousness during an Epileptic Seizure. (*Ibid.*)
16. SAUNDERS, E. W.—Four Cases of Genital Reflex. (*Ibid.*, Oct. 1881.)
17. HUGHES, C. H.—An Unique Case of Persistent Rhythmical (Clonic) Spasm. (*Ibid.*)
18. DIXON, A.—Case of Disseminated Sclerosis. (*Ibid.*, Jan. 1882.)
19. STEVENS, G. T.—Oculo-Neural Reflex Irritation. (*Ibid.*)
20. HUGHES, C. H.—Epileptoid Aphasia Superseded by Eczema. (*Ibid.*)
21. BALL, B.—Erythema Symptomatic of Cerebral Tumour. (*L'Encéphale*, Dec. 1881.)

1. *Friedrich on 'Myoclonus Multiplex'.*—In a paper read before the South-West German Association of Neurologists and Alienists, Professor Friedrich assigns the above name to a disease, observed by him in a man aged 50, and consisting of clonic spasms of certain symmetrical groups of muscles, with occasional asymmetry. The flexors and extensors of the forearm and leg were most affected; the spasms, continued during sleep, could be increased by irritating certain regions of the skin, and could be controlled by voluntary movements. After having lasted five years, the affection spontaneously disappeared within the space of eight or ten days. The author thinks it most probable that the symptoms were due to functional disturbance of the ganglion-cells of the anterior horns of the spinal cord.

2. *Jolly on Changes in the Body-Weight after Epileptic Attacks.*—In a paper read before the same Society, Professor Jolly said that, in consequence of Kowalewsky's statement that the body-weight was considerably diminished after epileptic fits, he had taken the daily weights of twenty-eight epileptics and a number of healthy persons. He arrived at the conclusion that the loss of weight, if any, caused by epilepsy, came well within the daily variations of weight which are observed in health, and which often amount, without any essential change in diet, to as much as 500 grammes (about a pound) above or below the usual level.

3. *Baumgärtner on Epileptic Attacks during Chloroform Narcosis.*—Before the same Society, Dr. Baumgärtner mentioned the cases of two epileptics, in whom typical epileptic fits were brought on by the administration of chloroform, and drew attention to the analogy existing between the anæmia due to vascular contraction in epilepsy, and that which results from the defective oxidation of the blood during chloroform inhalation.

4. *D'Olier on Co-existent Hysteria and Epilepsy.*

—The full title of this paper, for which the author obtained the Esquiroi prize for 1881, is 'On the Co-existence of Hysteria and Epilepsy, with distinct manifestations of the two Neuroses, considered in relation to both Sexes, but especially the Male'. The work is printed in the *Annales Méd.-Psychol.* for Sept. 1881. Eighteen cases are related and discussed; they serve to illustrate the four groups into which Charcot has divided *Hystéro-épilepsie à crises distinctes*. They are these: 1. Hysteria supervening in a subject already epileptic; 2. Epilepsy occurring in a patient previously hysterical; 3. Convulsive hysteria co-existing with *petit mal*; 4. Epilepsy super-added to non-convulsive manifestations of hysteria (contracture, anæsthesia, etc.). D'Olier's cases show that these forms of disease are met with in the male as well as in the female. His studies have led him to add a fifth group of cases to the above four. It consists of those cases in which epilepsy and hysteria not only co-exist, but, as it were, coincide; that is to say, each epileptic fit is accompanied by hystericform symptoms, and yet the attack is not a mixed one of ordinary hystero-epilepsy. The absence of permanent disturbance of sensation, the characters of the convulsions, sometimes predominating upon one side, with the consecutive sleep or stupor, appear sufficient to prove that the essence of the malady is true epilepsy, and quite distinct from the epileptoid phenomena of the hysterical attack. Some of the symptoms of hysteria which are super-added to the true epileptic fit are these: a hystericform aura (e.g., anæsthesia, formication, local paresis), partial consciousness during the convulsive attack, with hysterical sensations as of suffocation, globus hystericus, intense cephalalgia, hallucinations, etc.

5. Clark on Brain-Lesions and Functional Results.

—In the *Amer. Jour. of Insanity*, vol. xxxvii, No. 3, Dr. Daniel Clark opposes modern views as to the existence of motor centres in the cortex of the brain, by bringing forward a number of cases in which various regions of the brain have been injured without producing that impairment of function which he would expect to follow in the event of these views being correct.

8. Macleod on Chorea in Old Age.—Three cases are related (*Four. of Mental Science*, July 1881). A male first became affected at the age of 50. He afterwards became in turn maniacal, paretic, paralysed, and demented. He died at the age of 55, having suffered for five years from strongly marked choreic convulsions. Two sisters became choreic at the respective ages of 60 and 69. They suffered from the disease until death, which took place at the ages of 66 and 73 respectively. Their father and brothers had also been choreic. Both the patients had partial paraplegia and mental symptoms. In all three cases, local lesions were found after death, implicating the motor area of the cerebral cortex. In two of the cases, these consisted of large flattened cysts in the membranes, pressing upon the convolutions; in the other case a tumour, about the size of a chestnut, surrounded by other smaller ones, was found to be the cause of irritation and degeneration.

11. Ormerod on the Diagnosis of Tabes Dorsalis.

—In this paper (*St. Barthol. Hosp. Rep.*, vol. xvii) notes are given of twenty-one cases, with the special object of directing attention to the great value in diagnosis of the two following symptoms; 1. absence of the patellar tendon reflex and, 2, a peculiar state of the pupil, which, though it contracts normally

during accommodation, does not contract under the stimulus of light. The condition of the pupils presents varieties; they are usually contracted, but not always, and they may contract neither to light nor during accommodation. The cases given are arranged in three series, thus: 1. cases with well-marked inco-ordination, (2) with slight inco-ordination, and (3) with no inco-ordination; the author's object being to show that the two symptoms mentioned occur not only in the well-developed disease, but also in the pre-ataxic stage. Attention is directed to the fact that the only other symptom which can be regarded as really constant in the premonitory stage, is that of the lightning-pains. This symptom, being subjective, cannot be directly observed; it is, therefore, most desirable that the objective symptoms mentioned should be carefully studied and looked for. The cases given are also analysed with regard to other symptoms and points of interest.

12. Ormerod on Tendon-Reflex in Hemiplegia.

—Fifty unselected cases of non-recent hemiplegia are tabulated (*St. Barthol. Hosp. Rep.*, vol. xvii), according to the condition of the tendon-reflex, with a view to show with what frequency this is exaggerated in hemiplegic limbs, and to consider the relation borne by exaggeration of the tendon-reflex to the phenomenon of rigidity. Since exaggeration of the tendon-reflexes is said clinically to precede rigidity, and theoretically is referred to a similar irritation of the motor cells, the occurrence of it should count at least as a warning of impending rigidity. Dr. Ormerod's cases, to a considerable extent, support this view. They lead him to adopt the following conclusions. In some cases (about 20 per cent.) there is no excess of tendon-reflex on the hemiplegic side, and there is then no rigidity. In most cases (about 64 per cent.) there is such excess, and, should it be marked and persistent, generally there is rigidity present or to come. Thus, exaggeration of tendon-reflex may be taken as a delicate indication of that condition which, in an advanced stage, causes rigidity. 'Late rigidity' is known to affect the arm first and principally, and this appears to be the case whether the excess of reflex be in the arm or in the leg. In five cases, the tendon-reflex was found to be undoubtedly exaggerated on the sound side, but greatest on the paralysed side. Three somewhat anomalous cases are considered more or less in detail.

13. Gee on Cases of Cerebral Disease.—The cases described (*St. Barthol. Hosp. Rep.*, vol. xvii) are (1) hemichorea in a man aged 54, and (2) gelatiniform enlargement of the pons Varolii in a boy aged 9. Dr. Gee believes that the only previously recorded case of this latter form of disease was one of his own, described by Dr. Kidd in vol. xiii of the same reports. The medulla oblongata, down to the level of the lower border of the olivary bodies was involved in the translucent enlargement, as were the whole of the floor of the fourth ventricle and the walls of the aqueduct of Sylvius. The crura cerebri were flattened by pressure, but were not enlarged. The aqueduct of Sylvius was closed by pressure. The basilar artery was embedded in the swollen pons.

16. Saunders on 'Genital Reflex'.—Four cases are given (*Alienist and Neurologist*, Oct. 1881) of severe intermittent abdominal pain in male children of from three to five years of age. The pain was ascribed, in every case, to the irritation consequent upon an adherent prepuce. The author reports that the gastralgia ceased in each case as the immediate result

of separation of the prepuce from the glans, either with or without circumcision.

17. *Hughes on Rhythmical Clonic Spasm (Ibid.)*.—A lady, past the climacteric, who had never suffered from apoplexy, epilepsy, hemiplegia, rheumatism, or chorea, became affected with rhythmical spasms of the flexors of the four lesser left toes, of the extensor of the left great toe, and of the muscles regulating the movements of the head, neck, and eyelids. This case of athetosis has been in progress two years; the toes of the right foot have become similarly affected; treatment has not been very successful; that directed towards improving digestion and general nutrition having afforded most relief.

19. *Stevens on Oculo-Neural Reflex Irritation*.—Attention is first drawn (*Ibid.*, Jan. 1882) to the reflex irritation which may arise as a consequence of coarse disease of, or injury to, the eyeball, as in sympathetic ophthalmia. Cases are mentioned in which epilepsy and diabetes insipidus of long duration were cured by the removal of a disorganised eye. The author then passes on to consider the various conditions which produce difficulties in performing the function of sight, as causes of reflex irritation. One case is given in illustration. The author states that many cases might be adduced to show that refractive errors and muscular insufficiencies are prolific sources of sick headaches, neuralgias, chorea, hysteria, and other nervous disorders. He believes that we have in this fact a ready explanation of many cases of hereditary tendency to nervous diseases. For, while it is not probable that neuralgia, for instance, is of itself an inherited condition, there is no doubt that hypermetropia is directly inherited. If it has caused neuralgia in the mother, it may also cause it, or some other nervous affection, in the child. From a careful record of family histories, Dr. Stevens feels convinced that much of the mystery of inheritance in disease is explained by the inherited physical form of the eyes and physical proportion of the ocular muscles. He also believes that inveterate cases of nervous diseases, not amenable to other forms of treatment, will often yield to the simple process of relieving the eyes from muscular or refractive disabilities.

21. *Ball on Erythema Symptomatic of Cerebral Tumour*.—Professor Ball directs attention (*L'Encéphale*, Dec. 1881) to three cases in which cerebral tumour has been diagnosed, in each of which an erythema, either temporary or permanent, was developed. It affected various parts of the body, but was always on the hemiplegic side. Ball believed it to be due to a vaso-motor paralysis. In one case it appeared several times in the form of unilateral facial erysipelas; always coming on and disappearing with great suddenness, and never being accompanied by febrile symptoms. In a second case it took the form of *erythema nodosum*, appearing and disappearing quite suddenly, and affecting the leg and forearm of the paralysed side. In another case the erythema is described as consisting of marbled patches of bluish redness, which became violet under the influence of cold, and which surrounded islands of normally coloured skin. Both limbs of the paralysed side were thus affected throughout, and there were one or two faint patches on the forearm of the sound side. The redness disappeared upon pressure, but returned almost immediately. It was not accompanied by pain, local heat, or general fever. The face was puffy and of a more uniform redness, the cheeks and nose being chiefly affected.

C. S. W. COBBOLD, M.D.

TOXICOLOGY.

RECENT PAPERS.

1. MOLODENKOW.—Two Cases of Poisoning with Boracic Acid. (*Wratsch*, No. 31, 1881.)
2. RENDU.—Paralysis from Charcoal Fumes. (*Le Prog. Méd.*, No. 5, 1882.)
3. VAN DEN BERGHE.—On Copper. (*Bull. de la Soc. de Méd. de Gand*, 1881, p. 499.)
4. WOOD.—Poisoning by Stramonium. (*Canada Lancet*, Vol. xiv, p. 161.)
5. JOHANSON.—On Bacteria. (*Pharm. Zeits. für Russland*, 1880, No. 24.)
6. WILLIAMS and WATERS.—Strychnine. (*Proc. of Royal Soc.*, No. 32.)
7. CLEAVER and WILLIAMS.—Aconite. (*Chemist's Jour.*, 1882, p. 146.)
8. HOFMANN and SCHULTZE.—Death from Burning. (*Wiener Med. Blätt.*, No. 50, 1881.)
9. DU MOULIN.—On the Physiological and Therapeutic Action of Phosphorus. (*Revue de Thér.*, Feb. 1, 1882.)
10. Rules for the Guidance of Experts in Cases of Suspected Poisoning. (*Rivista di Speriment. di Freniatria e di Med. Legale*, 1881.)
11. VOGEL.—Examination of Spermatic Stains. (*Wiener Med. Blätter*, No. 12, 1882.)
12. GUTTMANN.—The Action of Different Preparations of Aspidospermine. (*Archiv für Exper. Pathol. und Pharmak.*, Band xiii.)
13. BAADER.—Poisoning by Stramonium. (*Correspond. für Schweizer Aerzte*, Oct. 1881.)
14. LANGERFELDT.—Poisoning by the Seeds of the Castor-oil Plant. (*Berliner Klin. Woch.*, No. 1, 1882.)

1. *Molodenkow on Two Cases of Poisoning with Boracic Acid*.—These cases both occurred in the surgical department of the Moscow Hospital, where a five per cent. solution of boracic acid is in common use. The first (*Wratsch*, No. 31, 1881) was a woman, aged 25, on whom thoracocentesis had been performed for a pleurisy with serous exudation, the pleural cavity being washed out with the above solution. Soon after the operation, vomiting set in, with small, weak pulse. The following day the same symptoms continued, and an erythema, commencing from the face, gradually spread over the back. On the third day after the operation, the patient died in full consciousness, complaining only of disturbances of vision. The above symptoms had persisted, and the erythema had extended to the thighs. The second case was that of a boy aged 16, affected with lumbar spinal curvature and consecutive abscess pointing in the right buttock. The abscess was aspirated, and washed out with boracic solution. Half an hour after the operation, vomiting and scarcely perceptible pulse supervened, and, on the second day, erythema commencing from the face, hiccup, and death. *Post mortem* examination was not allowed in the first case; in the second, the results were negative, with the exception of a few extravasations on the inner surface of the pericardium, death being caused by paralysis of the heart. In neither case was chloroform used during the operation.

JAMES ANDERSON, M.D.

2. *Rendu on Paralysis from Charcoal Fumes*.—M. Rendu read a paper, at the Société Médicale des Hôpitaux (*Le Prog. Méd.*, 1882, No. 5), on the paralyses which follow intoxication by the vapour of charcoal. A patient, aged 30, shut herself up with a pan of live charcoal; after twelve hours, she was found senseless, but came to herself in the course of

the day, when she presented a right-sided hemiplegia. It was not true hemiplegia, as the paralysis was limited to the lower half of the two right limbs; the motor paralysis was accompanied by perfect anæsthesia, abolition of all sense of pain, temperature, etc. Reflex sensibility was preserved; the tendon reflexes of the elbow and knee were exaggerated. Electrical contractility was abolished, and only returned after two months' faradism. This proves that the peripheral nerves are involved as well as the nerve-centres. She also presented local symptoms of perverted nutrition, local sweats, and the smooth state of the skin described by Weir Mitchell, also œdema of the arm, which lasted two months. The œdema was hard, painful, and at first resembled an abscess, much like what has been described by M. Leudet. M. Rendu concludes that hemiplegia from this cause is mixed, that it is not exclusively central, and that it especially behaves like a peripheral paralysis. The patient so far recovered that she could walk with a slight limp, and could work at her needle. R. SAUNDBY, M.D.

3. *Van den Bergh on Copper*.—Van den Bergh (*Bull. de la Société de Médecine de Gand*, 1881, p. 499) finds, as Odling found many years ago, that copper is, apparently, a normal constituent of bread and flour. These substances yield from 8 to 10 parts per million of metallic copper.

4. *Wood on Poisoning by Stramonium*.—Prof. Casey A. Wood publishes a case of poisoning by stramonium-seeds (*Canada Lancet*, vol. xiv, p. 161). About half a dozen seeds, together with some of the pulpy matrix of the fruit, were eaten by a girl aged 5 years. Symptoms came on within twenty minutes, beginning with dryness and burning of the throat, thirst, inability to swallow, nausea, and retching, but no vomiting; pain in the stomach, flushed face, giddiness, singing in the ears. Twitchings of the muscles of the forearm and leg were next observed, and delirium set in. When seen an hour and a half after taking the poison, the girl was lying on her back delirious, apparently unconscious, and in convulsions. She caught at imaginary objects in the air. The eyes were bright and glistening, the conjunctivæ red and injected, the pupils widely dilated. The delirium was of the busy kind, with fits of laughter, alternating with fits of crying and horror. The convulsions were general. The skin was dry, hot, and of a deep scarlet colour. Temperature was normal; the pulse small and rapid; respiration was interrupted, but not rapid. The treatment consisted in evacuation of the bowels by purgatives and enemata, and the administration of hourly doses of five grains each of potassium bromide and chloral-hydrate. The hypodermic injection of one-tenth of a grain of morphia hydrochlorate was subsequently followed by quiet sleep and speedy recovery. From six ounces of the urine voided five hours after eating the seeds, a substance was obtained by Stas's process which dilated the pupil when applied to the eye of a man, causing dilatation of the pupil for many hours.

5. *Johnson on Anæsthetics*.—Dr. J. G. Johnson of New York (*Bull. of the Medico-Legal Soc. of New York*, vol. iv, Nos. 7 and 8, May, Dec. 1881), has discussed anæsthetics from a medico-legal point of view, and sums up as follows. 1. Anæsthetics do stimulate the sexual functions; the ano-genital region is the last to give up its sensitiveness. A charge made by a female under the influence of an anæsthetic should be received as the testimony of an insane person is. They cannot be rejected, but the *corpus delicti aliunde* rule should be insisted on.

Dentists, or surgeons, who do not protect themselves by having a third person present, do not merit much sympathy. 2. Death from administration of chloroform after a felonious assault, unless the wounding were an inevitably fatal one, reduces the crime of the prisoner from murder to a felonious assault. 3. The surgeon has no right to use chloroform to detect a crime against the will of the criminal. 4. The army surgeon has a right to use chloroform to detect malingers. 5. The medical expert, notwithstanding he is sent by order of Court, has no right to administer an anæsthetic, against the wish of the plaintiff, in a personal damage suit, to detect fraud. 6. Gross violations of the well-known rules of administering anæsthetics, life being lost thereby, will subject the violator to a trial on a charge of manslaughter. 7. A surgeon, allowing an untrained medical student to administer anæsthetics, and life being thereby lost, will himself be subjected to a suit for damages. What he does through his agent he does himself. 8. The physician who administers an anæsthetic should attend to that part of the work, and nothing else. He should have carefully examined the heart and lungs beforehand. He should have the patient in the reclining position, with his clothes loose, so as not to interfere with respiration; should have his rat-tooth forceps, nitrite of amyl and ammonia, and know their uses, and when to use them and artificial respiration. 9. In operations on the ano-genital region and the avulsion of the toe-nail, complete loss of sensation in these parts should never be allowed; and no operation on these parts, at all, should be done under an anæsthetic, unless by the approval of a full consultation of men who have a knowledge of the dangers. 10. Chloroform cannot be administered to persons who are asleep, without awakening him, by a person who is not an expert. Experts themselves, with the utmost care, fail, more often than they succeed, in chloroforming adults in their sleep.

6. *Williams and Waters on Strychnine*.—Messrs. Greville Williams and Waters (*Proceedings of Royal Soc.*, No. xxxii, p. 162) have discovered an antidote for strychnine in the organic base, first discovered by the former among the products of the destructive distillation of cinchonine with caustic potash, and to which he has assigned the name beta-lutidine. They find that this base causes a distinct increase in the tonicities of both cardiac and voluntary muscular tissue, also a retardation in the rate of the heart's beat, and that it arrests the inhibitory power of the vagus; that, by its action upon the nerve-cells of the spinal cord, it, in the first place, lengthens the time of reflex action, and then arrests that function; finally, that it is successfully antagonistic to strychnine in its action upon the spinal cord.

7. *Cleaver and Williams on Aconite*.—Messrs. Cleaver and W. Williams (*Chemists' Jour.*, 1882, p. 146) have investigated the alkaloid or alkaloids of *Aconitum paniculatum*, a species of aconite now much used in this country instead of, or in conjunction with, *A. Napellus*, the official aconite. They found that the flowers yielded 0.9, the leaves 0.1, and the extract made from the plant 0.3 per cent. of non-crystalline alkaloid, having a very bitter taste, but totally free from aconitine. The authors point out the advisability of using definite and reliable preparations; and that, since *A. paniculatum* contains no aconitine, and Japanese roots contain twice as much of a potent alkaloid, japaconitine, as the roots of *A. Napellus* do of aconitine, very serious errors may arise. It is curious to note that *A.*

paniculatum was at one time the official plant of the London and Dublin pharmacopœias, but was soon abandoned.

8. *Hofmann and Schutze on Death from Burning.*—The burning of the Ring Theatre at Vienna gave rise to many important medico-legal investigations respecting the sex and identity of charred corpses, of which Ed. Hofmann and Schutze give a description (*Wiener Med. Blätter*, 1881, No. 50, p. 1538). In determining the sex in cases where the external genitals were completely destroyed, the chief point relied upon was the absence or presence of the uterus and ovaries. In ascertaining the approximate age, external appearances were quite unreliable. The union of the epiphysis with the diaphysis of the humerus, which first takes place at twenty-four years of age; the ossification of the ribs, and more especially the ossification of the larynx, which generally begins between the thirtieth and thirty-fifth year, and is completed in the fortieth year, were found to be the best and most easily ascertained data. In women, the state of the ovaries was important; these being smooth in girls and young women, cicatrised in older women. The hair of the head and beard was generally black, and had to be washed before its natural colour could be ascertained. The cornea was generally milky and turbid, as if boiled. Often the obsolescence of the cornea gave to the iris a deceptive blue appearance. The teeth, though calcined and crumbled, were, nevertheless, serviceable in determining the age. The nails, too, in some cases, served for identification. In a large number of cases the blood was of a florid colour; and this may have been due to the inhalation of carbonic oxide gas.

THOS. STEVENSON, M.D.

9. *Du Moulin on the Physiological and Therapeutic Action of Phosphorus.*—M. du Moulin (*Revue de Thérap.*, Feb. 1, 1882) presented to the Brussels Academy of Medicine, on the part of M. Lesseliers, of the Clinic of the University of Ghent, the report of a case of poisoning by phosphorus observed in his hospital practice. The case, M. Du Moulin remarks, raises and illustrates several important points in the toxicology of phosphorus. 1. The symptomatology of poisoning by phosphorus is sufficiently advanced to allow the diagnosis of this kind of poisoning, notwithstanding the absence of the poisonous agent, and the obstinate denial of the patient. 2. The poisoning having been effected by a relatively small quantity of phosphorus, it has been possible to follow its regular evolution and to observe the successive invasion of all the organs—the stomach, liver, heart, muscles, blood-vessels, mouth, and kidneys. 3. It has especially afforded the opportunity of verifying the condition of the various secretions, and of pointing out in the latter changes which were by no means expected. Thus the urine became not only icteric, but at the same time alkaline and albuminous, and the earthy salts had almost completely disappeared from it. Its density was 1006, the urea was reduced from 15 to 25 per thousand, the normal amount, and to 3.3 per thousand. At the same time, the urine contained leucine and tyrosine. The fæces were discoloured (icteric) and mixed with a little blood; the sweat was alkaline; the vomit (a mixture of gastric juice and mucus) was alkaline; on the other hand the saliva was strongly acid; the lacrymal secretion remained alkaline. 4. Essence of turpentine, administered on different occasions, was rejected each time immediately after its ingestion. Gargles of chlorate of potash having

been prescribed to soothe the inflammation of the mouth, the patient swallowed by inadvertence the greater part of the solution. M. Du Moulin, finding after this a sensible improvement in the condition of his patient, and also remembering that M. Huseman had recommended chlorate of potash in phosphorus poisoning, continued the administration of that agent. A few days afterwards, the patient was completely well. Without wishing to affirm that the cure should be attributed to the action of the chlorate of potash, M. Du Moulin is of opinion that in cases of this kind it would be well to employ this medicine, either alone or conjointly with essence of turpentine, according as the patient is or is not able to tolerate the administration of the latter drug.

10. *Rules for the Guidance of Experts in Cases of Suspected Poisoning.*—The following is an abstract of a circular of the Italian Minister of Grace and Justice, published in the *Rivista Sperimentale di Freniatria e di Med. Legale*, 1881. The Commission constituted by Royal Decree of 11th April 1880, for the purpose of studying the questions related to evidence in alleged crimes of poisoning, and to the special characteristics of cadaveric poisons, suggested certain general rules which should be observed by the judges and the experts, in order that the most important elementary facts, from which the proofs of the crime may be inferred, may not be lost. It is of the greatest importance, as soon as the first suspicions of poisoning have arisen, that, with all possible care and diligence, all the facts relating to the progress and the morbid symptoms preceding death should be collected; for whilst the memory of these is fresh it is not difficult to succeed in this, but at a later period it is unusual to do so, unless incompletely and by means of ambiguous depositions, in consequence of which the judge is deprived of a very important criterion as to the true character of the case. It is his duty to recommend, with the utmost insistence, the adoption of such measures as may secure the better selection of medical experts to be entrusted with the first operations, with such guarantees of capability for the performance of their special work, as cannot be possessed, and indeed are but indistinctly possessed in general, by those who have attained to the doctorate in medicine and surgery. This is an error which may result in irremediable loss of proof of the actual crime, and may open the way to the most unjust conclusions. 1. The inspection, and the section of the body, should be made as soon as possible after death. Not only should the cavities of the thorax, abdomen, and cranium, but also the vertebral canal, be opened. The conditions of each viscus and tissue, and of the blood, ought to be diligently examined, with the aid of the microscope when necessary. 2. For the preservation of the viscera and other substances to be subjected to chemical examination, well closed glass vessels, new, with ground stoppers, and not before used for any purpose whatever, and washed out with a mixture of water and alcohol, are to be employed. 3. To the viscera and other substances placed in these vessels, there should be added as much alcohol as will cover the solids. For liquids to be preserved, half a volume in excess of that for such liquids will suffice, provided the alcohol be of the strength of 95 to 98 per cent.; but if the strength be lower, about one-fourth additional will be necessary. 4. Only pure alcohol, previously redistilled, is to be employed. 5. In every case, not less than a half litre of the alcohol employed is to be preserved separately in one of the glass vessels described, for the controlling chemical researches. 6.

In another of the glass vessels, the entire brain and spinal cord are to be preserved. 7. In a third, both lungs, the heart, spleen, kidneys, and the bladder (after being emptied of its contents), and as much blood as possible from the heart and great vessels, are to be placed. In this vessel may also be preserved the matters which have escaped into the thoracic cavity. 8. The urine is to be preserved separately. 9. After application of proper ligatures, the stomach and the small intestines are to be removed, successively opened, and their contents put into a vessel, in which the stomach and intestine themselves shall also be placed; not, however, until after having instituted on each a diligent examination, in order to discover whether there are any pathological alterations; this intimation will also apply to every other viscus and organ. In this vessel the matters gathered from the abdominal cavity, when there are such, may be preserved. 10. The large intestine with its contents to be treated, and to be preserved in a vessel; and in case of the exhumation of a body, the excrement or deposit that may be found on the bottom of the coffin, may be placed in the same vessel. 11. In another vessel, the entire liver is to be preserved. 12. A good portion of the muscles detached from the body, so as to avoid as far as possible including any of the adipose tissue of the skin, will be placed in a vessel. 13. In special instances of the presence of traces of blisters, sores, fistulous sinuses or wounds, which may have been the possible passages of entrance of poison, a portion of the tissue of the part should be removed, and preserved in another vessel. Particular parts injured in the buccal cavity and the pharynx, may indicate the nature of the suspected poison. 14. There should, in case of exhumation, be preserved in another vessel a sample of the earth surrounding the coffin. 15. The dissecting expert is recommended to use the precaution of making deep and numerous incisions into the parenchymatous viscera and the muscles, before placing them in the vessels, so that the alcohol may readily penetrate them as far as possible.

11. *Vogel on Examination of Spermatic Stains.*—The following method, recommended by Vogel, is described in No. 12 of the *Wiener Med. Blätter*, 1882. The stain is softened with water, and, in the moist condition, is taken off with a knife, avoiding, as much as possible, the removal of any of the tissue on which it lies. A few small hairs are unimportant, however, as they are readily dissolved from the scrapings on the object-glass or slide with a drop of concentrated sulphuric acid. After two minutes, one or two drops of tincture of iodine are added, the whole stirred carefully with a glass rod, and covered with a large cover-glass, which, if the dark-brown mass be too opaque, may be pressed down a little, unless it be intended to transfer smaller portions to other slides. The spermatozoa are stained distinctly brown, and are visible under the microscope in their whole contour; but it is not possible to keep the staining in longer than twenty-four hours, unless the sulphuric acid be washed out, when the preparation is soon spoiled. Alcohol at once decolorises the spermatozoa, showing the staining to be only superficial.

12. *Guttman on the Actions of Different Preparations of Aspidospermine.*—In the *Archiv für Experiment. Pathol. und Pharmak.*, Band xiii, p. 451, this author publishes the results of his experiments on animals with aspidospermine, which he finds to be a poison affecting the respiratory and circulatory apparatus. In cold-blooded animals, paralysis of res-

piration, in warm-blooded ones, of the heart, is the first to take place. The action upon the heart is independent of the pneumogastric, and is due to paralysis of the ganglia. The only appearance of an effect upon the central nervous system in the case of the frog is paralysis.

13. *Baader on Poisoning by Stramonium.*—In the *Correspond. für Schweiz. Aerzte*, Oct. 1881, this author describes the cases of three boys who had been poisoned by eating the seeds of the datura stramonium, a mistake which does not often occur, as these seeds are very bitter. The symptoms were very like those of poisoning by atropia. One boy talked confusedly, and sat down in a corner, so that he was put to bed under the impression that he had been drinking wine. Jactitation now began; he had spasms of both arms and legs, and talked to himself whenever he believed himself unobserved, laughed and clutched at the sheet continuously; consciousness was perfect, and he answered all questions correctly; the pulse was frequent, the respiration laboured; the pupils were dilated, scarcely reacting to light, and the field of vision was dimmed; he had a sense of tickling in the throat, and there was hyperæmia of the mucous membrane. Castor-oil and black coffee were administered, and the phenomena had disappeared on the following morning. Another of the boys exhibited more alarming symptoms. The agitation was severe; consciousness was lost; there were gnashing of the teeth and whimpering, with inability to swallow fluids; the skin was cold; the pulse could not be counted; respiration was irregular; he had a red rash, best marked over the head and neck, and involuntary urination. Within twenty minutes, two doses, each of a centigramme of morphia, were injected. Black coffee and rum were given internally. The next day all the symptoms had disappeared, except the dilated pupils and the dysphagia, which remained a little longer.

14. *Langerfeldt on Poisoning by the Seeds of the Castor-Oil Shrub.*—Dr. Otto Langerfeldt (*Berliner Klin. Woch.*, 1882, No. 1, and *Med. Chir. Rund.*) was called to the son of an innkeeper early one morning, and found that the boy had come home from school on the previous day, complaining of headache and nausea; he vomited repeatedly, and said that he believed his illness to be from partaking of some speckled seeds, and that several of his comrades had similar symptoms. The boy's face was pale, cold, and cyanosed; he lay on his back with his legs drawn up and groaned loudly; the eyeballs had receded; the countenance was anxious; the skin clammy; the temperature was sub-normal; the pulse 110, very weak, and hardly perceptible. He did not like to answer questions, but was perfectly conscious, and complained of burning in the throat, and intense pain in the epigastrium. The abdomen was retracted, the pharynx swollen and hyperæmic, the tongue dry and covered with yellow fur. Treatment, directed principally to combat the collapse and alarming symptoms, consisted in the regular administration of port wine, strong coffee, ice and cold milk, and was soon followed by remission of the worst symptoms; but the complaints of pain became louder, the vomiting continued, and there was some blood mixed with the yellow mucus voided. A hypodermic injection of morphia succeeded in allaying the thirst and pain; but constipation was obstinate. Although the progress was slow, complete recovery took place, and the boy was able to go to school on the sixth day. The seeds which were found in the

boy's pockets turned out to be those of the *Rianus comminus*, and possessed a bitter, but not unpleasant taste. To the boy's statement, 'that he had eaten ten to fifteen beans,' the author does not attach any importance; and he believes that it is probable the active principle is a volatile, fatty acid, which is obtained in the saponification of the oil, and which is slightly yellow, without smell, and of a very disagreeable, adherent taste. The seeds, however, must have a much more acute action than the mild oil, a fresh preparation of which, according to the pharmacologist, Hager, is much more drastic than when it has been boiled with water, and so deprived of its sharp action. [It would have been desirable to know where the boys obtained these deleterious seeds, so as to guard against similar mistakes.—*Rep.*]

F. WILLIAM ELSNER.

REVIEWS.

A Manual of Physiology. By E. D. MAPOTHER, M.D., Professor of Physiology in the Royal College of Surgeons of Ireland. Third edition, by J. F. KNOTT, Fellow and Demonstrator of Anatomy, R.C.S.I. Dublin, 1882.

MAPOTHER'S physiology, having an established reputation in the Dublin schools, has been entrusted to Mr. J. F. Knott for re-editing, and now appears as a handy volume, not so overgrown as might have been expected. The book is chiefly occupied with physiological physics and physiological chemistry of the newest kind; and there is a little of the modern and extremely exact kind of histology introduced here and there, the histological part being by no means comprehensive. The work is a prodigiously learned one, and bristles with references to the names (within brackets) of a whole army of investigators, who appear to be almost always of foreign extraction. No short book on physiology was ever half so learned as Mr. Knott's edition looks,—if we may apply to it the words that were once used of a judge in his wig. It appears that 'articular hæmorrhages in the dog have been produced by stimulation of the sigmoid gyrus (Albertoni);' again that 'a diminution of albuminoids in contracting muscle has been observed (Ranke, Danilewsky); but the subject requires further research, as the sources of error are very numerous. With regard to *creatine*, opinions are at variance. Sarakow has observed an increase of creatinine during tetanus, and believes that creatine is converted during the contraction of muscle. But later and more extended researches have shown that it is only creatin that is normally present in muscle (Nawrocki, Voit, Basler), with the exception, perhaps, of the heart.' That is a sample of the large type; but there is even more learning, more conflict of opinion, more names within brackets, in the numerous pages of small type with which the text is diversified. Perhaps there are students who like that sort of thing; but we very much doubt if this remarkable work will satisfy the intellectual needs of any youthful student of physiology, who does not happen to be at the same time under the guidance of a sensible and judicious teacher.

The book is obviously a *précis* of larger and more original handbooks; and, if any student cares to commit to memory its enumerations of facts, tabular and other, and its summings up of opinion, he may

reproduce them on the day of examination, with the well-grounded confidence that his examiners will not find in them anything that is antiquated or erroneous. Mr. Knott acknowledges his indebtedness to an English and a French physiological text-book, to a German encyclopædic work, and to an histological atlas and text, all of them well known as the productions of men who have worked and thought much, or read widely, on physiology and histology. His own manual does not profess to have issued from the laboratory so much as from the writing-table, and its literary merits (including methodical order and typography) are not small. We are further reassured that the editor has in nearly all cases verified the references to original papers. His researches among the endless volumes of foreign physiological literature have certainly led him to a pretty strong critical opinion (expressed in the preface), about 'the dross or worthless chips which too often encumber the elaborations of the German workshops,' and about the fleeting nature of those discoveries 'whose sand-supported foundations must soon be sapped by the rapidly advancing tide of scientific knowledge, and whose millimetric periods of existence are usually meted out by the times which separate the publication of the consecutive numbers of Pflüger's *Archiv*.' That kind of Olympian criticism—we seem to have heard it somewhere before—comes doubtless with a good grace from the gentlemen of England (or Ireland) who sit at home at ease. The Olympian stand-point (or sitting posture) has, however, one disadvantage. Dross, and worthless ships, and sand-supported foundations are inevitable in scientific progress; but it is not so much the literary craftsman as the working physiologist who is likely to know them when he sees them. There are a number of useful diagrams, in the chapters on the physiology of the muscular and nervous systems; they look like diagrams that we have seen somewhere before, but, as they are not credited to any other author, they have probably been drawn up by Mr. Knott himself. The histological woodcuts are about thirty in number, all of them familiar acquaintances, but not all of them acknowledged.

Handbuch der Therapie von Ziemssene. 2te Band 1ste Theil. Balneotherapie. Von Professor O. LEICHTENSTERN. Leipzig, 1880.

THIS book created quite a sensation on its appearance eighteen months ago, and was violently attacked in the meeting of German Balneologists at Berlin. Like Braun (whose book is known in England through Dr. H. Weber's excellent edition), the author makes a violent and not undeserved attack on many of the faiths and traditions, and extravagant professions of bath-doctors. No doubt he carries his strictures too far; and, when he insists much on the mere empiricism which guides the use of mineral waters, he might have remembered that there is still much empiricism in the ordinary practice of medicine, although we are making progress in the investigation of the action of remedies, and endeavour to prescribe them rationally; that is, according to the latest pathological views, which often, unfortunately, are merely the expression of the passing opinion of the day.

The most useful part of the book is Dr. Leichtenstern's analysis of the principles of balneology. He considers first the physiological and therapeutical action of baths; next that of the internal use of

water; and then examines the operation of the most important groups of mineral waters. The book throughout is written from a somewhat German point of view, and there is scarcely allusion to French balneological literature or to French baths. The author, therefore, does not allude to their favourite arsenical waters; and we are glad to remark, that he laughs at lithia, and iodine, and bromine springs, let alone barium, rubidium, and other substances, which figure as important elements in the analysis of particular waters. Dr. Leichtenstern will have no homœopathy in balneological any more than in ordinary practice.

He attributes far more importance to artificial waters than most authors do, having nothing of the old faith in nature's chemistry. The weakest portion of the book is the third one, in which the list of baths is scanty, and in which no full analysis is given of any of the waters. In it we observe that 'Bath, on the west coast of England,' being an earthy water, figures among the purely indifferent ones—while the far more popular, equally indifferent one, Buxton, is omitted. Leuk, with the same analysis, does duty under the two heads of earthy and of indifferent waters. Of this, however, the author is aware. As it was amusing to observe in the midst of Braun's scepticism his faith in his own waters of Rehme, so it is curious to notice the prominence given by Dr. Leichtenstern to the pleasant acidulated springs of the Rhine valley, while few others, and we think no French table-waters, are mentioned.

This book is undoubtedly a valuable one for bath-doctors. It should make them inquire after the reason of the faith which is in them, and should contribute to their rational employment of their waters.

The profession in general should be glad to have this clear exposition of the principles of balneology, although they will not find it much of a guide to the practical selection of waters. It is not one that will prove attractive to patients who may take it up, for its incredulity would rather act as a dissuasive against the use of any natural mineral waters.

J. MACPHERSON, M.D.

Etude sur les Mouvements des Yeux. Par E. LANDOLT. Reprint from *Archives D'Ophthal.* Nov., Dec. 1881. Paris 1882.

WHILE refraction and accommodation have received their full share of consideration from ophthalmologists, at any rate since the appearance of Donders' classical work, the same can scarcely be predicated of the movements of the eyes. These, taken apart, form a chapter in ophthalmology, which has scarcely as yet received the attention which it deserves. With the exception of the great work of Alfred von Gräffe on the subject, little has been written on it, especially in recent times. Dr. Landolt, in a very ably written monograph, calls attention to this want, and endeavours, not without success, to supply it. In his *Etude sur les Mouvements des Yeux*, he brings a good deal of ingenious observation and of sound deduction to bear on the whole subject of the associated movements of the eyes, both in health and in disease.

In dealing with a subject so difficult and complicated as the above, he naturally is careful to define his terms. Thus, at the outset he insists on the necessity of clearly distinguishing between the 'field of vision' and the 'field of fixation'. The former is

the measure of indirect vision, the latter of direct. In estimating the field of vision the observed eye is fixed; in estimating the field of fixation it is allowed the full play which its muscular apparatus is capable of giving. He describes various methods for determining the limits of this latter field, of which it will be sufficient to notice the one which he terms the 'objective mensuration.' It consists in observing the position on the cornea of the reflex of a flame travelling round the arc of the perimeter. So long as the eye follows it, and vision is direct, the flame will always fall on the same portion of cornea. So soon as its position varies, the limit of ocular movement will have been reached in that direction. The amount can be read off on the instrument in degrees or fractions of a degree; when it differs for each eye, the difference will be the expression of the difference in the associated movements of the two.

The size of the field of fixation depends on various factors, such, for instance, as the size and shape of the globe in relation to its orbit. In several cases in which the states of refraction, as in the observations of Donders and Schurwman, appeared to bear a definite relation to the size of the field of fixation, the truth was probably that the ocular globe was in certain conditions, such as hypermetropia or emmetropia, smaller than in others, e.g. myopia, and therefore more free to move round its own centre. Again, the insertion and power of the recti muscles exercise an important influence. Hence sometimes the fields of fixation are found to be limited in hypermetropic eyes and increased in myopic. These propositions are illustrated by several cases, in which also the important part played by the condition of the cranial development is well shown.

Any departure from health as regards the associated movements of the eyes, is at once seen when the binocular field of fixation has been determined. This should exactly coincide with that portion of the monocular fields of fixation, which, when they are superposed by their centres, is common to both eyes. This doctrine is applied to the pathological conditions which affect certain groups of ocular muscles. In that insufficiency of the internal recti occasionally met with, in which the fields of fixation are very limited, and in which there is a marked tendency to divergent strabismus, Dr. Landolt sees a remnant of atavism. He considers this condition as dependent on insufficient development of the eye, and from the point of view of ocular evolution he finds it a not uninteresting fact.

Perhaps the most instructive portion of Dr. Landolt's monograph is that which deals with the therapeutics of squint. He remarks fairly enough that the main object of treatment should be not merely to remove deformity, but to re-establish binocular vision. He endeavours to attain this, not by the exclusive use of one method of treatment but of several, either singly or combined. His first effort is directed to the producing of diplopia, and from this he works backwards, as it were, until, in many of his cases, which, at the outset, were most unpromising, he has succeeded in obtaining binocular vision. He makes large use of prisms and of the stereoscope, attaching particular importance to the latter instrument. In unilateral strabismus, he combines tenotomy of one muscle with advancement of its antagonist. In alternating strabismus, he divides the operation over both eyes, but allows an interval of some months to elapse between each operation. The value of systematic exercises with the stereoscope after division of the muscles is especially in-

sisted on. Even in cases of marked anisometropia, an effort should be made to procure partial binocular vision, for, as Dr. Landolt well remarks, weak or imperfectly corrected vision in one eye is better than absolute cæcity. A sensation of relief is produced, even though vision be not absolutely much improved. Moreover, retinal images, very much differing in size and clearness, can be united stereoscopically. An earnest and persevering attempt should, therefore, always be made to do this, if only to prevent those relapses which are so common after operations for strabismus.

In conclusion, we may say that this little *brochure*, on a confessedly difficult subject, which has perhaps not received all the attention it deserves, will well repay perusal. It is written in a strictly scientific spirit, but is not without those graces of style and that clearness of diction with which readers of Dr. Landolt's other works are already familiar. The value of the present monograph is much increased by a series of well chosen clinical examples, and by a number of excellently engraved diagrams of normal and pathological fields of vision and of fixation.

LITTON FORBES.

Syphilis des Verriers : Hygiène et Prophylaxie par la Visite Sanitaire. Par le Dr. GUINAND. Paris : Masson. 1881.

IT is well known that syphilis has been propagated in France among those engaged in glass-blowing through the medium of the blow-pipe which, in the French manufactories, is passed in rapid succession from the mouth of one workman to that of another during the various stages of the process. In this *brochure*, M. Guinand of Rive-de-Gier, one of the most important centres of the trade, gives an account of the several instances in which epidemics of syphilis have originated in contagion from workmen with syphilitic lesions of the mouth, by means of the blow-pipe, and adds particulars of other cases observed by himself of late years while acting as medical attendant in the district. For the prevention of such accidents—of which the results are not confined to the men themselves, as the disease is frequently spread by them to their wives and children—the author insists that the only effective measure consists in a periodical and strict examination of the workmen, and the suspension, for a sufficient period, of all those found to be suffering from syphilis in a communicable form. A regular monthly inspection, M. Guinand thinks, would be sufficient, provided all new-comers were also examined on their arrival. Such a system of inspection he has carried out at the manufactory of Richarme frères at Rive-de-Gier for some years with the best results; and the author's chief object in writing on this subject, is to urge the importance of extending the examination to all the other manufactories in the district. It was suggested some years ago that the use of a separate mouthpiece for each workman would answer every purpose as regards protection; and a contrivance of this kind, proposed and invented by M. Chassagny, came into partial use among the glass-blowers. It was found, however, that the changing of the tube interfered with the rapidity of the work; the result being that the workmen soon became careless, and neglected to make use of it.

ARTHUR COOPER.

Antiseptic Surgery: Its Principles, Practice, History, and Results. By W. WATSON CHEYNE, M.B., F.R.C.S. London : Smith, Elder, and Co. 1882.

MR. WATSON CHEYNE has presented surgeons with a complete text-book on the antiseptic method of treating wounds. The work is appropriately dedicated to Professor Lister, whose teaching and practice it may with confidence be taken to represent. Portions of the work have formed the essays to which the following prizes were awarded, viz.: Syme's Surgical Fellowship in the University of Edinburgh, in 1877; the Boylston Prize and Gold Medal, from the Harvard University, in 1880; and the Jacksonian Prize of the Royal College of Surgeons of England, in 1881. Several chapters of the work are devoted to the various theoretical and practical aspects of fermentation, spontaneous generation, and the very interesting subject of micro-organisms in their relation to septic and aseptic wounds. Here are detailed many experiments by the author on micrococci, showing that these bodies exist in acute abscesses, but in chronic ones they are no longer active; and also that they develop under carbolic dressings, not sufficiently charged with the acid. Plates are appended, showing diagrammatically these bodies. The materials employed in Listerism, their mode of preparation, and the manner in which they should be correctly used, are fully described and illustrated. Such chapters are of great importance to those who have never had an opportunity of witnessing strict antiseptic surgery. Mr. Cheyne does not confine himself merely to a description of strict Listerian method, but enumerates many modifications of the same, which may be utilised when complete appliances are not at hand.

The history of antiseptic surgery, as traced in these pages, is both interesting and exhaustive. With regard to the results of aseptic surgery, Mr. Lister's own cases of psoas abscesses, arthrotomy, and compound fractures, are drawn out in the form of tables. For purposes of comparison, statistics of eminent surgeons, Listerian and otherwise, are introduced.

The volume is bulky, but the matter it contains has been well digested, and the book can be confidently recommended as an authoritative reference.

THOMAS F. CHAVASSE.

A Treatise on the Diseases of Infancy and Childhood. By J. LEWIS SMITH, M.D. Fifth Edition. London : H. K. Lewis. 1881.

IN many respects this work is an admirable one. The descriptions are for the most part graphic and accurate, and constitute a most readable account of children's diseases. But wholly unqualified praise cannot be accorded, since the book is very far from being a complete treatise on the subject. As examples of the omissions, we may select ringworm and favus; no mention is made of tinea or pediculi; and, among cutaneous affections, molluscum, herpes, and pemphigus are not referred to. Such important subjects as the differential diagnosis of acute tuberculosis and typhoid fever, the relations of syphilis to rickets, and tubercular peritonitis, are passed over in very few words. The nature of the diet in scarlet-fever, especially if there be any renal complication, and the method of feeding in pertussis, are not even mentioned, and illustrate the absence of such practical points as a 'student or physician in daily practice' would

reasonably expect to find in a book designedly prepared for him. Many chapters in the work are deserving of the highest praise, but the full value is undoubtedly marred by the numerous and important omissions.

Tables for Measuring the Colour-Sense Quantitatively.

By BRUNO KOLBE. St. Petersburg. Krantz, 1881.

THESE tables consist of vertically-disposed bands of white, red, green, rose-colour, black, violet, orange, blue, and yellow. Each takes its rise above in a horizontally disposed band of neutral grey. To this the different colours are added in gradually increasing degree, by a process of fine stippling, till at the lower end of each band each colour is in a state of complete saturation. Figures placed by the side mark in one-tenths the various degrees of saturation.

The whole table is placed in a case from which it is to be drawn out slowly. The subject of examination is tested with the various colours, one by one, beginning at the least saturated extremity (0.1 of the colour). If he perceive a colour mixed with neutral grey, in the proportion of 1 to 9, his colour-sense is normal. His colour-sense is feeble if he require a colour to be half-saturated before he can distinguish it. Any deficiency more pronounced than this is colour-blindness. To avoid naming the colour, he is asked to indicate it by the corresponding skein of coloured wool. It is intended that the examination should be made at the distance of 1 mètre. Examinations made by means of this apparatus indicate that it is likely to be of great use, where we want to determine the degree of the colour-sense as quickly as possible.

W. A. BRAILEY, M.D.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Second edition. Lewis. 1882.

THIS, the second edition, of Dr. Murrell's excellent little pocket manual should be in the hands, or rather, in the pocket, of every medical practitioner. It measures only $4\frac{3}{8}$ by $2\frac{3}{4}$ ins., and is a $\frac{1}{4}$ in. in thickness; yet within this small space are contained ninety-six pages replete with valuable information. Under the head of each poison—and they are arranged alphabetically—clear, concise, and accurate information is given as to what is to be done in any case of poisoning. What is particularly valuable is the instruction given as to the administration of physiological antidotes by hypodermic injection; and, in this respect, Dr. Murrell's work is unique.

The new edition is enriched by the addition of statements as to the fatal dose of each poison, when known. The work is brought up to date; and we observe that it contains a page as to the treatment to be adopted in the case of so novel a poison as resorcin.

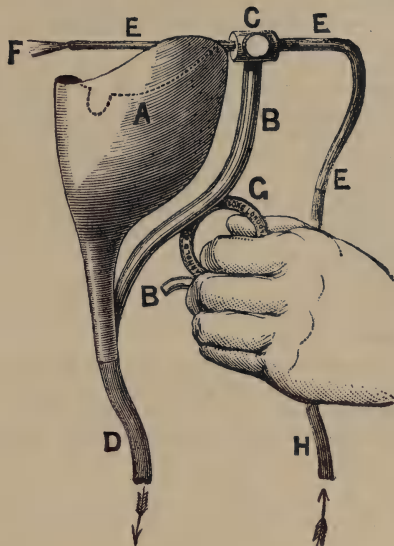
THOS. STEVENSON, M.D.

NEW INVENTIONS.

THE SIMPLEX EAR IRRIGATOR.

This instrument is the outcome of an endeavour to obviate something of the difficulty, inconvenience,

and discomfort which attend the operation of cleansing the auditory meatus by the ordinary syringe or its modifications. The instrument may be described as follows. There is a reservoir, A, in shape like a quarter of a sphere, whose flattened surface is adapted to the side of the neck below the ear, so that the lobule of the ear projects over the edge of the reservoir; fluid issuing from the meatus thus flows into A, and escapes by the outlet pipe D, (to which India-rubber tubing is attached), into the jug or basin placed to receive it. From D springs the arm, B B, made of flexible metal, through the extremity, C, of which passes the tube, E E, and to



which are also attached the rings, C, by which the apparatus is held in position. The tube, E E, of uniform circumference throughout its length, slides through the head, C, of the arm, B B, and is fixed in position by a small set-screw; it can be entirely withdrawn from C for the purpose of being cleaned or packed. To E E E is attached the light India-rubber tube, H, connected at its other extremity with the syringe or siphon, by means of which a stream of water flows through E E into the meatus. In practice, the patient is seated at the corner of a table, on which stand the basin containing the water or other fluid which is to be injected into the meatus, and a jug or basin for collecting the effluent water; the extremity of the India-rubber tube D is passed into the latter; the tube H (from the 'simplex' syringe already standing in the basin of injecting fluid) is slipped on the tube E E, and a little of the fluid forced through it so as to fill E E, and thus prevent the unpleasant impingement of air which might otherwise occur when the instrument was first used. The tube E E is then almost withdrawn from C, and the instrument is held in its proper position against the side of the neck, the lobe of the ear falling over the flat side of the reservoir. The flexibility of the arm B B allows to C lateral or vertical motion adapted to any or either ear, so that the tube E E can be passed into the meatus as far as is necessary or convenient, and fixed by a turn of the set-screw. Then, the instrument being held in position by one hand, as in the figure, the other hand, working the simplex syringe attached to H, forces the fluid, in an easily regulated stream, into the meatus, whence it flows

into A, and thence, by the tube D, which is large enough to allow any fragment of cerumen to pass without obstructing the outflow, into the vessel placed to receive it. For the motive power needed, Dr. Shelly of Hertford, the inventor, usually employs an Arnold's simplex syringe; it is portable, and always ready for use; but a Higginson's or Kennedy's syringe, if at hand, can be made to answer the purpose quite well. If a perfectly continuous stream be desired, Messrs. Arnold supply a double action simplex syringe; or the same end may be attained by making the tube H draw the fluid by siphon action from a vessel placed on a shelf or bracket at the desired height above the patient's head. To be able to dispense with the cumbrous swathing of towels, and with the unpleasant wetting which they too often fail to prevent, with the basin which must be held beneath the ear, and with the perpetual withdrawing, refilling, reintroduction, and emptying of the ear-syringe in ordinary use, is no small advantage for an instrument which has the additional claims of being light, very portable, easily cleaned, always in order, and not expensive. Dr. Shelly has found it very efficient; it does not terrify young and sensitive children, and it can be used in almost any position of the patient, either in or out of bed. It requires only one pair of hands, and, indeed, with a little practice, patients can easily learn to use it for themselves.

Dr. Shelly records his thanks for much valuable and courteous assistance to the makers, Messrs. Arnold and Sons of West Smithfield, who supply the instrument complete, with the requisite tubing.

A NEW METHOD OF URETHRAL IRRIGATION.

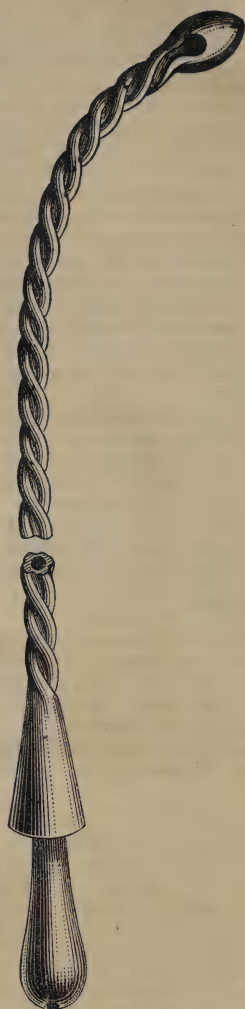
Mr. Walter Whitehead, Surgeon to the Manchester Royal Infirmary, states, in a communication to the *British Medical Journal* of April 8, that irrigation judiciously employed in suitable cases and at a proper stage of the complaint is a valuable adjunct to the treatment of gonorrhœa. In the first place, the prolonged stream of water effectually removes the inflammatory products of the disease, which obstinately and intimately adhere to the surface of the urethra, and protect the mucous membrane from the immediate influence of the remedies we endeavour to bring into action, either through the urine medicated by the administration of balsamic drugs, or by the more direct influence of antiblennorrhagic injections. The tenacity with which the secretions adhere has, no doubt, much to do with the difficulties encountered in the treatment of gonorrhœa. He points out that it must be remembered that the urethra in health is an elastic tube tolerant of reasonable dilatation; but when invaded by inflammatory changes, it is converted into a comparatively unyielding tube, intolerant of any force having a tendency to expand its calibre; consequently, irrigation, to be safe and successful, must be conducted on a principle consistent with the laws of hydrostatic pressure; and as it is prepared to use irrigation in a disease which involves conditions opposed to distension, the mode of irrigation, whilst insuring a continuous and copious stream of fluid, must be free from any undue tendency to stretch the walls of the urethra.

These conditions Mr. Whitehead has obtained by the following apparatus and mode of procedure.

He has had catheters made, some in vulcanite and other in soft India-rubber, by Messrs. J. and W. Wood of King Street, Manchester, with a deep spiral groove from tip to stem on their outer aspect. The catheter ends, as represented in the accompanying engraving, in a hollow bulb perforated with two large apertures directed backwards. The other extremity of the catheter is adapted for the ready attachment of India-rubbertubing. The groove in the catheter is made with a depth double the capacity of the central tube, so that the facilities for the return of injected fluids are greater than the requirements; and, in consequence, there is no excessive pressure on the urethra, the outflow being more than ample for the inlet of the irrigating fluid.

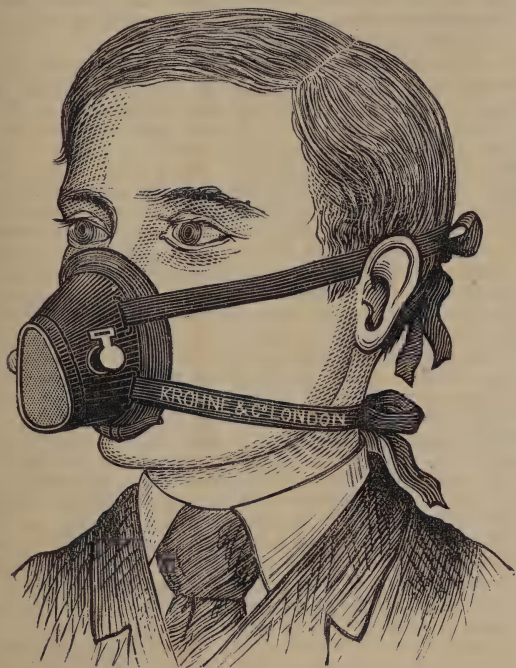
In using the irrigator, it is passed to different lengths of the urethra, after the manner of an ordinary catheter, according to the nature of the case, the aim being to get well behind the furthest limits of the diseased surface. The distance can be roughly estimated by the clinical features of the case, and by testing how far back the discharge can be pressed out of the urethra.

When introduced, a length of India-rubber tubing is attached to the irrigator; and the other end of the tube, passed through a leaden weight, is placed in a vessel containing the fluid to be used, and elevated above the body of the patient. The tube being made to act as a siphon, the strength of the stream can be regulated by the height of the vessel, and by this means a simple and complete control can be exercised over the force brought to bear upon the surface of the urethra and the feelings of the patient. The bulbous extremity of the catheter practically restricts the action of the fluid to the urethra in front, and prevents any of the injection from passing backwards into the bladder. The direction of the stream is also influenced by being diverted forwards within the hollow bulb. The irrigation of the urethra being regarded merely as a measure preliminary to treatment, it remains, after the mucous membrane has been thoroughly cleansed, to apply one or other of the various topical solutions we are in the habit of using; and this can be easily accomplished by connecting a syringe to the irrigator after the rubber tubing has been removed.



KROHNE AND SESEMANN'S ORO-NASAL RESPIRATOR.

THIS instrument has been made by Messrs. Krohne and Sesemann for Dr. Edward Blake, of Seymour Street, Hyde Park. In a description of it communicated to a medical contemporary, he writes a few words as to how to use medicated vapours to the best advantage. He says that probably their use is never sufficiently continuous. To use them for a few minutes two or three times a day is really trifling with these agents, potent enough when properly applied. They should be used by the hour together, nay, in severe cases even during the major portion of the day. This can readily be accomplished by means of the oro-nasal respirator figured below.



Messrs. Krohne and Sesemann's little apparatus covers both nose and mouth; it can be worn with complete comfort whilst reading, writing, or working. It is small and portable, weighing only two ounces, and can be easily carried in the pocket; its greatest advantage, however, is that it does not permit the patient to go on re-inhaling the same air, which is a very vital point.

The diseases which have, in Dr. Blake's experience, been the most benefited by inhalations are: Common coryza: camphor, ipecacuanha. Ozæna: phenol, thymol, chlorate of soda. Whooping-cough—first stage: ipecacuanha, belladonna, drosera, mephitis; second stage: phenol, benzole. Croup: iodine, bromine. Diphtheria: phenol. Syphilitic sore-throats: iodoform (masked by Peruvian balsam), phenol, thymol. Spasm of glottis: sulphurous acid, stramonium vapour. Bronchiectasis and putrid bronchitis, pulmonary abscess, gangrene, and cancer: phenol, thymol, kreasote, terebene, oleum pini sylvestris, oleum pini Canadensis, oleum pini pumil. If any of the above prove particularly repugnant to the patient, the odour may be masked by means of balsam of Peru, oil of cloves, or of cinnamon. For hopeless coughs, chloroform may be added to any of the

above. Asthma: amyl, eucalyptus, ipecacuanha, musk. Angina pectoris, epilepsy: amyl. Dr. Blake points out that to practical men many other drugs and many new applications of them will occur.

The importance of disinfecting the sputa of tubercular subjects is sufficiently shown by the researches of Koch, Villemin, of Tappeiner, Gerlach, and Creighton, bearing on the ready diffusion of tubercle.

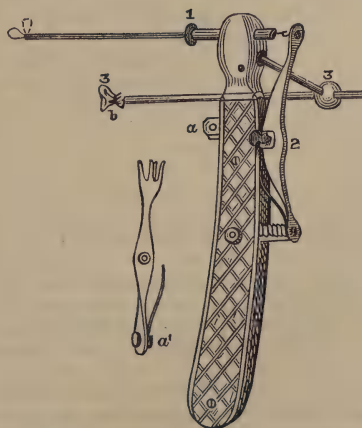
MATTHEWS' PORTABLE BINAURAL STETHOSCOPE.

In this elegantly constructed instrument, the makers have supplied a want which has always been felt by those who use the binaural instrument. It is, as ordinarily constructed, so large and cumbersome, that it is impossible to carry it about with comfort. The stethoscope here figured is about half the size of the ordinary binaural, and, when detached in three portions, the chest-piece being removable as well as the metal ear-tubes, it is packed away in a case 6 in. by 3 in. in dimensions. Another improvement is the substitution of the usual elastic band and hinge-joint between the two metal tubes by an upward spring joint, which exerts no undue pressure on the ears, and, indeed, renders its employment more comfortable than does the band. The conducting capabilities of the instrument are perfectly satisfactory, and have stood well comparative tests applied to it practically in cases of pulmonary and cardiac disease. Its price is 21s., and it is made by Messrs. Matthews, of Carey Street.



CZARDA'S SNARE WITH TORSION MECHANISM FOR REMOVAL OF AURAL POLYPI

DR. G. CZARDA, of Prague, holding that traction on a partially divided fibrous polypus is bad practice, particularly when the growth has its origin near some important part of the internal ear, has devised

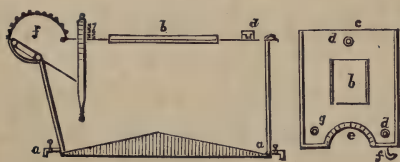


a new form of snare. This consists of the ordinary double tube, furnished at (1) with a small and slightly cogged button, by means of which, after the wire-loop has been tightened around the polypus by

depressing the lever at (2), this tube can be turned on its long axis, so as to exert torsion on the wire. With the use of this instrument, if the polypus be but partially divided, the twisted growth can be left *in situ*, the wire having been cut through, until it dies and is detached, iodoform or boracic acid being applied to its surface to render it aseptic. In addition to the usual double opening at the free extremity of the tube, Dr. Czarda's instrument has a double opening at the upper part of the tube. In some cases, particularly when the whole of the auditory passage is occupied by polypoid growths, it is desirable to tighten the loop in a direction from above downwards. The arrangement at (3) is intended to prevent injury to the internal ear during an operation on an unruly patient, the knob at (δ) being applied to the skin below the ear, so as to keep the whole instrument steady.

WINCKEL'S NEW BATH FOR INFANTS.

DR. F. WINCKEL, of Dresden, describes in the *Centralblatt für Gynäkologie*, No. 1, 1882, a recently devised form of bath for the prolonged bathing of infants. This permits frequent addition and removal of water without disturbance of the little patient, so that cold and soiled water can be withdrawn and replaced by hot water, and the temperature of the bath be thus steadily maintained. The following, Dr. Winckel states, are the chief advantages of this bath, as shown by experience. Even very unruly children, when placed in this bath filled with warm water (97 deg. to 99 deg. Fahr.), remain there quietly and without complaint, taking their food and at times sleeping. New-born infants can be treated in a bath of this kind for about twenty-four hours continuously. As it is not necessary to add warm water less frequently than every half-hour, too much work is not thrown on the nurse.



The following are mentioned as the indications for prolonged bathing of new-born and suckling infants; 1. low vitality in infants between twenty-eight and thirty-six weeks of age; 2. great prostration after intense asphyxia resulting from loss of blood; 3. extensive cutaneous disease; 4. extreme emaciation from gastro-intestinal catarrh.

MISCELLANY.

PROFESSOR FREUND of Strasburg, who has been invited to fill the chair of Clinical Midwifery and Gynaecology held by the late Professor Spiegelberg, has, it is said, declined the offer on account of the defective condition of the gynaecological clinic.

NEW METHOD OF VACCINATION.—A man in Colfax, Illinois, sauntered into a drug-store, and mistaking the vaccine points on the counter for tooth-picks, picked his teeth with them and vaccinated himself, not entirely to his satisfaction.

THE FUNCTIONS OF A PHARMACOPŒIA.—A correspondent of the *Sanitary Engineer*, Oct. 15, p. 527, sign-

ing himself 'Pharmacist', expresses his opinion that the *Pharmacopœia*, in order to fulfil its purpose, should totally ignore the question of the relative merits of the various drugs and chemicals used in the treatment of diseases, and must not fail to enumerate and describe as many as possible of them, together with their simple preparations, fixing the strength, quality, and purity, and rendering their identification and distinction from other substances certain at the hands of properly trained pharmacists. He disagrees entirely with the idea that the *Pharmacopœia* should be either a depurator or a leader in therapeutics. It certainly would be a very great safeguard to the public, and would prevent considerable delay in the dispensing of prescriptions, if the prescribers would distinctly state the strength of new preparations on their prescriptions, and if there could be a publication once a year, in one or all of the leading medical journals, of the new preparations, their mode of preparation, and means of testing their purity. By the time that each new edition of the *Pharmacopœia* was published, those which had proved worthless, or fallen out of use, could be omitted.

RESEARCHES ON DEAF-MUTISM.—A discussion has lately taken place as to whether deaf-mutes taught to speak do so with the accent of their native district. M. Hémet affirmed this in the French Academy, from personal observation, and noted the interesting nature of the fact (as he thinks it) of dialectal accent being hereditary. Mr. Axon has supported this view by other recorded cases, one being in an old number of the *Philosophical Transactions*—a congenital deaf-mute, who, when a young man, gradually acquired hearing and speech after a second attack of fever, and spoke with Highland accent; another, the case of pupils in deaf and dumb schools in Spain, observed by Ticknor to speak with distinct provincial accents; a third that of a deaf-mute taught by Mr. Alley of Manchester, and found to speak with the Stafford dialect. On the other hand, M. Blanchard noted the harsh and disagreeable nature of deaf-mutes' speech, and thought their pronunciation had not the quality of accent. Professor Graham Bell says that in America this faulty utterance has been quite overcome; but, having examined the speech of at least 400 deaf-mutes, he has never remarked any such tendency as M. Hémet affirms. In a few cases dialectal pronunciations were heard, but it always turned out that such children could talk before they became deaf. Professor Bell (in *Nature*, March 2) criticises the cases adduced. In that of the young Highlander there was probably imitation of heard speech. A large proportion of deaf-mutes, it is now known, have been able to hear in infancy, and many to speak, so it was an erroneous assumption of Ticknor that the pupils could never have heard a human sound. The youth taught by Mr. Alley became deaf at a very early age, but it is not said what age. M. Hémet's data are also pronounced defective. M. Hémet, further, has said he is unable to conceive how, in losing the use of speech, deaf-mutes should retain the unconscious memory of accent. Mr. F. I. Faraday (*Nature*) finds this conceivable as due to automatic activity of brain-tissue, and he cites a case in which a man, becoming deaf in one ear through typhoid fever, often seemed to hear with that ear entire sentences which had not been spoken. Turning from this, we note an interesting recent observation by Dr. Boucheron with regard to several cases of deaf-mutism in children, with accompanying giddiness, difficulty in walking, nervous cries, etc., which were treated successfully by a new method. Supposing that those troubles might be due to a compression of the acoustic nerve and the nerves of the semi-circular canals (which are known to be closely concerned with bodily equilibrium), such compression being the result of vacuum existing in the cavity of the tympanum, so that the tympanic membrane is pressed in on the bones of the ear, Dr. Boucheron sought to destroy this vacuum by passing air into the cavity through the Eustachian tube. The children rapidly improved, being soon able to walk normally, regaining by degrees both hearing and speech, and improving generally in health and disposition.

The London Medical Record.

BIERMER ON CONTRACTION OF THE KIDNEY.

PROFESSOR BIERMER (*Breslauer Ärztlich. Zeitsch.*, 1882, No. 1) points out that until 1853, when Dr. Wilks first showed that there existed a form of Bright's disease unattended by dropsy, the opinion of the German medical clinical teachers always held the contracted kidney to be the final stage of ordinary parenchymatous nephritis. That it may be occasionally seen in such cases is possible, although it is rare for patients to survive the effects of the processes which lead to its formation. Following Dr. Traube and Dr. George Johnson, Dr. Biermer insists, from a purely clinical point of view, upon the existence of a special form of renal inflammation, which may be properly described as genuine contraction of the kidney. The course and sequence of symptoms in such cases are too typical for them to be denied a special category. Beginning, without special cause, with polyuria and small quantities of albumen in urine of low specific gravity, a gradual but progressive wasting ensues, the complexion becomes sallow, the left ventricle of the heart becomes hypertrophied, the tension of the pulse becomes increased, dyspnoea follows, and disturbances of digestion or of vision take place, without a trace of dropsy having been observed. In the later stages, the evidences of uræmia are the chief symptoms, which may culminate in death.

It is hardly possible to believe that cases running such a course could have begun with parenchymatous nephritis; and hence, Dr. Biermer holds that the process from its commencement must have been a different one. He suggests that no special etiology can be associated with this form of disease. In none of his cases does he find any exciting cause except chills, and upon the importance of these he lays some stress.

Repeated chills and complaints of cold feet are common before the disease is recognisably established; and from this fact he is inclined to ascribe a good deal of the disease to exposure of the extremities in cold underground dwellings, damp floors, etc., recognising in the polyuria of the initial stages the agency of arterial congestion within the kidney, induced by these means. He points out, in passing, that the very occurrence of increased instead of diminished secretion of urine proves that the early affection of the kidney is not obstructive in its nature, *i.e.*, causes no narrowing of the lesser tubules.

In the later stages, three influences may be recognised as playing a part in the destructive processes in the walls of the vessels—the mechanical influence of the frequently increased tension within the vessel, the degenerative influence of frequent congestion, and the more subtle influence of impaired nutrition. To the second of these, *viz.*, frequent congestion, one must look for the explanation of the occasional excess of albumen thrown off.

The form of contracted kidney described in association with atheroma of the arteries differs in many points from this genuine idiopathic nephritis atro-

phicans. In the atheromatous form, the symptoms of changes in the heart and arteries appear long before the albuminuria and the signs of renal contraction. In the genuine contracted kidney this order is exactly reversed. Histologically, also, there is a difference, the contracted kidney showing a marked overgrowth of connective tissue, the atheromatous form being simply atrophied, with certain epithelial changes.

Two other forms of contracted kidney may be recognised, *viz.*, the contraction after parenchymatous nephritis, or the amyloid state, and the gouty kidney. The first of these, with or without amyloid change, is rarely seen. The gouty kidney, besides its diathetic origin, shows changes which are more purely atrophic, and often cystic or pyelitic. In its early stages, moreover, its symptoms are quite distinct, although less easily distinguished towards the close.

The course of a genuine contracted kidney is from the beginning insidious and chronic. The earlier stages have been already mentioned. The later stages may be divided into two periods—one, in which the concurrent hypertrophy of the heart maintains a sufficient compensation, and the other, in which it ceases to compensate properly, and in which the symptoms of uræmic poisoning are most prominent. Complications such as apoplexy, pneumonia, erysipelas, etc., are frequent; but, where none such occur, contraction may go on to an astounding extent.

Of the individual symptoms, the state of the urine is the most important. The proof of the presence of albumen in the urine is indispensable; but it must be remembered that the amount often varies greatly, and that it may sometimes be altogether absent for a short time. Bodily exercise and muscular effort favour the production of albuminuria, and Biermer has often produced it in suspected cases by these means. Microscopic examination generally shows a scarcity of solid elements, a few isolated hyaline cylinders, and, at times, a little renal epithelium, but rarely any blood-corpuscles. The excessive secretion of urine is not accompanied by thirst.

The condition of the heart, of the arteries, and of the fundus oculi, are of decided importance in diagnosis; though neither of them, taken alone, is essential. A certain amount of hypertrophy of the left ventricle is almost always present, and high tension is maintained in the arteries, even, as some English observers have shown, during the diastole in extreme cases. Palpitation is frequently complained of. Retinal changes may or may not be present, and are very variable in their extent and severity. Disturbance of respiration is always present; dyspnoea is frequently the first subjective complaint. In the earlier stages, it is probably due to cardiac derangement, but later on the cause is generally uræmic. Occurring frequently in cases with pulmonary complications, its importance as diagnostic of renal disease may be overlooked. Cerebral symptoms are not usually present till the late uræmic stages. Early uræmic states may show themselves in headache, vomiting, etc.

Disturbance of digestion is sure to appear sooner or later. The general nutrition is always affected; indeed, it is never properly maintained in the presence of chronic renal disease. This fact serves to distinguish the organic renal mischief from the functional and innocuous albuminuria which has been described of late years. If any person have albuminuria for several months, and do not lose flesh, he certainly does not suffer from contracted kid-

ney. Dropsy plays a negative part, and, if present to any extent, must be due to one of the other forms of chronic renal disease, and not to genuine contracted kidney.

Biermer closes his remarks with the statement that he knows of no effectual means of treatment for this disease. He speaks strongly as to the danger of checking the diuresis, and hence finds all astringents to be contra-indicated. Even tannin, which he would employ in parenchymatous nephritis, he objects to in this form of disease. Diuretics and tonics are to be used until the uræmic state is arrived at; and during that period only narcotics, as morphia and chloral, should be given, simply with a view to the temporary relief of the strugglings and sufferings of the patient.

E. CLIFFORD BEALE, M.B.

LITTEN ON THE RELATION OF LIVER-DISEASES TO RETINAL AFFECTIONS.

DR. LITTEN has communicated (*Deutsch. Med. Woch.*, 1882, No. 13) the results of his ophthalmoscopic examinations during the last ten years of patients affected with liver-disease. The changes observed he divides into three classes; first, extravasations, mostly in the granular layer; second, white patches in the retina caused by fatty degeneration; and, lastly retinitis pigmentosa. Extravasations he has observed in fifteen cases of liver-disease; namely, in four cases of uncomplicated obstructive jaundice, partly catarrhal, partly through calculi, in four cases of hepatic cancer, in one case each of acute atrophy, of phosphorus-poisoning, of hepatic abscess, and of dropsy of the gall-bladder, and in two cases of cirrhosis. In the four cases of obstructive jaundice the extravasations appeared at the climax of the disease, and caused no disturbance of vision. The case of abscess was the result of calculi, and was the only one out of many such cases in which Dr. Litten observed retinal extravasation. He finds that retinal extravasation is almost a constant symptom in those cases of hepatic abscess occurring from embolism in septicæmia and other infective diseases. In the case of dropsy of the gall-bladder no hæmorrhages were observed till the swelling was aspirated, when retinal extravasation was very soon found. Of the above fifteen cases, only seven proved fatal, so that it cannot be regarded as an unfavourable symptom, as has been supposed. At the same time, Dr. Litten in these seven cases found extravasations in other organs, and no doubt there were also extravasations in those cases that recovered. These extravasations do not seem to be caused solely by the deleterious effect of the bile in circulation, for Dr. Litten has found that retinal extravasation never occurs in dogs and rabbits from ligation of the bile-ducts, notwithstanding the marked jaundice produced thereby.

The second form of retinal alteration, Dr. Litten has observed in a case of phosphorus poisoning, resulting in acute atrophy of the liver. The retina in this case was studded with white patches, about a sixth or a fourth of the size of the pupil, and these patches he found *post mortem* to be caused by fatty degeneration of the retina, with numerous 'granule corpuscles'. A case of phosphorus poisoning, with acute atrophy of liver, has since been published by Duke Charles of Bavaria, in which centres of fatty degeneration were found in the cortex cerebri; and

Dr. Litten considers that here, as in many other cases, the ophthalmoscopic appearances of the fundus oculi give us an opportunity of observing the pathological processes going on in other organs.

The third form of retinal change, consisting in typical pigmentary degeneration of the retina, Dr. Litten has observed in two cases of liver-disease, both cases being hepatic cirrhosis in the stage of contraction. The first patient was a man aged 58, with extreme ascites. He complained of failure of sight, consisting in hemeralopia and a narrowing of the field of vision, with good central vision. The ophthalmoscope showed characteristic retinitis pigmentosa. After paracentesis, however, neuroretinitis appeared, with marked increase of the pigment and loss of central vision. The second case was also a male, aged 42, who was admitted for ascites without jaundice. The fundus and vision were normal on admission; but after some time he complained of hemeralopia, but with no narrowing of the field of vision. The ophthalmoscopic appearances were characteristic, and during the eight days that the patient was under observation increased markedly. Unfortunately, neither of these patients could be kept under observation for any lengthened period. Landolt has observed retinitis pigmentosa in a case of hepatic and also in a case of nephritic cirrhosis, and considers that it is a chronic inflammatory process, in which the nervous elements of the retina are destroyed by the connective tissue, formed in the first place in the adventitia of the peripheral retinal vessels. This process seems closely allied with the chronic inflammatory process resulting in contracted liver and contracted kidney; not that either of these conditions produces the retinal affection; but the patient affected with the two diseases has either by heredity, by syphilis, or some other cause, a disposition to the formation of connective tissue in certain organs. The degeneration of the retina depends on diminished nutrition, and is associated with a disappearance of the retinal pigment, and a migration of the same into the innermost retinal layers. Dr. Litten has also proved experimentally that the pathological pigment of the retina comes from the choroid, with which it is allied both histologically and chemically. How the migration of pigment takes place he cannot explain. He mentions, however, a fact recorded by Professor Bischoff, that two dogs, in which he had formed a biliary fistula, became completely amaurotic, and their eyes showed *post mortem* the appearances of retinitis pigmentosa as it occurs in the human eye; but the pigment was deposited also in the hyaloid membrane, and even in the lens.

The record of careful and prolonged observations like those of Dr. Litten is in the highest degree important. Through the work of Dr. Hughlings Jackson, we have in this country become aware of the importance of ophthalmoscopic examination in all cases of nervous affection, and we are probably all of us fully impressed with its value in Bright's disease; but we are still too much inclined to isolate the ophthalmoscopic changes as peculiar to the eye, and having little or no association with changes occurring in other organs. Such observations as those of Dr. Litten, recorded above, have a general value in correcting this error, as well as a special value in extending our knowledge of ophthalmic diseases. At the same time, we must remark that the value of his observations would have been very considerably increased, had he stated in what propor-

tion of patients with liver-disease retinal changes occur, and also had he stated definitely in each case that there was no possibility of complication.

JAMES ANDERSON, M.D.

GERHARDT ON CERTAIN VASCULAR NEUROSES.*

CLAUDE BERNARD'S experiments in 1851, on division of the cervical sympathetic nerve, were the first to throw any light upon the subject of the functions and imperceptible actions of the vaso-motor nerves, which have been further elucidated by the researches of Cyon, Ludwig, and Von Bezold. They show that the circulatory system would be capable of taking up double the amount of blood it normally contains, and that it accommodates itself to the blood in an irregular manner; so that, according to necessity, a larger amount of blood can be supplied to the more important organs. Each alternation of temper, each operation of the intellect, requires a momentary flow of blood to the brain; and in a central station, situated in a small part of the medulla oblongata, the vaso-motor nerves lie close together. From it issue the enormous impulses which set in motion the system of vessels. Lesser independent vaso-motor regulators are found in the spinal cord and outside the arteries. Such apparatus as the vaso-dilator nerves show the multiplicity of the aids which can here be called in; others, like the depressor of the heart, show what powerful levers can be applied, and how correctly and silently they are used.

It is indeed a question in what pathological process the vaso-motor nerves do not take a prominent part, every theory of fever and inflammation being connected with them, and the hemiplegia which has been cured being still recognisable from the altered pulse-curve. Some arteries only are dilated in commencing aortic patency, whilst others resist the pressure of the systolic blow by the tonicity of their muscular coat. The unilateral blush of the pneumonic and phthisical patient, and the higher temperature in one axilla of the former, are due to vaso-motor disturbances, as are also Cheyne-Stokes respiration, diabetes, and some forms of albuminuria; and it would not be going too far to assume that those neuroses which are of short but severe duration, and are easily treated, undergoing relapses and communicated by irritation, are likewise due to vaso-motor disturbances in the central nervous system, such being chorea, epilepsy, tetanus, and catalepsy.

The formation of aneurisms, and vaso-motor gangrene, show adequately the capabilities of a disordered function of the vascular nerves; a symptom of poisoning by ergot being gangrene, caused by paresis of the arterial muscular coat; and the connection of some aneurisms with paralysis of the vessels, having led Von Langenbeck to the use of ergot, subcutaneously, in their treatment. The author selects the best known of the numerous vaso-motor disorders, and points out that the heart's action depends on its own ganglionic system, on the quickening influence of the sympathetic, and the inhibitory influence of the pneumogastric nerve-fibres. In addition to these, there is the resistance offered by the contraction of the muscular coat of the arteries, which, if increased, retards the heart's action, and

the different conditions of fulness of the coronary arteries, a narrowing of whose lumen also retards the heart, as is seen typically in aortic stenosis. Of least account in pathological cases are the strength, number, and rhythm of the contractions; regarding the first of which the author remarks that more than half of the patients seeking his advice about palpitation of the heart suffered, not from valvular disease, but from some disturbance of the cardiac innervation. Increased action of the heart is in many cases a symptom only of hypertrophy from other causes, *e.g.*, cirrhosis of the kidney; in others, *e.g.*, simple hypertrophy, it is the primary and causal symptom, the hypertrophy the secondary. The number of contractions becomes interesting when the extremes are considered, which constitute peculiar forms of disease due to well-known disturbances in the nervous system of the heart.

Of *Tachycardia*, which occurs in two forms, lasting and transitory, the author gives very interesting cases. It is necessary to distinguish between the purely nervous form of tachycardia and others of a toxic nature (from atropia, tobacco, etc.), or symptomatic of a local or general disease, which are only of minor import. Paralysis of one cervical sympathetic has no perceptible influence on the heart, according to Nicati, whereas, on the other hand, stimulation causes increased and stronger cardiac action. This is the place in which to make mention of the palpitation and increased pulse-rate occurring in Graves's disease, and in many persons with affections of the neck and upper dorsal region. Most cases of nervous tachycardia are to be attributed to paralysis of the vagus; those which have a pulse-rate of 200, to a combined stimulation of the vagus and sympathetic; lighter forms entirely to the latter.

Bradycardia, or slowness of the heart, can be induced by poisoning, either through the vagus or through the cardiac ganglia (digitalis and salts of the bile-acids), also by anaemia of the heart itself, *e.g.*, in atheroma of the coronary arteries, in aortic stenosis, and in fatty degeneration. Flint has described bradycardia as a purely functional disturbance of the heart, and in six cases observed the pulse to fall to sixteen beats in the minute. In two of these there was epilepsy, and in two, delirium. Dr. Gerhardt relates a case of his own in which the *post mortem* examination revealed a moderate extravasation of blood between the aorta and pulmonary artery, corresponding to the cardiac plexus.

Angina pectoris (*stenocardia*) is independent of lesions of the spinal or the cerebral cardiac nervous system. The true lesion is well known; whilst, in the more functional cases, *e.g.*, the hysterical, spasm of the arteries over a great extent of the body, or simply of the coronary arteries, seems to be the lesion. Nothing is more useful in its treatment than the hypodermic injection of morphia; in the free intervals, the nature of the case will indicate the treatment necessary; *e.g.*, in heart-disease, rest of body, locally cold, internally digitalis, squill, valerian, in short, means to elevate the blood-pressure. Hysterical cases are to be treated by gymnastics, cold baths, arsenic, bromide of potassium, etc.

Nicati has most admirably described the diseases of the cervical sympathetic. Paralysis of one nerve causes hyperaemia of the side of the head by the vaso-motor nerves, in consequence of which, there are unilateral elevation of temperature and hyperidrosis. External cold has less effect on the diseased side than on the healthy one; but also warm air is

* Volkmann's *Collection of Clinical Lectures*, 1881.

less capable of elevating the temperature of the altered side than of the healthy; the ocular tension is lessened on the unhealthy side, the pupil is contracted. In the second stage, the vessels of the paralysed side become less full; the face therefore is paler, the temperature of the side is decreased, and anidrosis takes the place of hyperidrosis; the pupil is smaller, the ocular tension less even than before, the latter probably from the decreased arterial tension which caused the pale face. H. Müller has discovered in the eyelids smooth muscular fibres, paralysis of which causes gradual closure of the lids and ptosis. A certain irregularity in point of occurrence is noticeable in this lesion. Franck found, in his experiments on animals, that irritation of the sympathetic produced dilatation of the pupil earlier than narrowing of the vessels; and, on ceasing the irritation, the pupil contracted, but the vessels became still more contracted. Nicati finds a middle stage between the first and second stages of paralysis, in which the hyperæmia and elevation of temperature continue, but the hyperidrosis has already ceased; and Dr. Gerhardt goes on to say that the relation between these three symptoms is not so simple as hitherto imagined, and that the dry, hot, and flushed face of a fever-patient militates against it. Ott and Wood Field have endeavoured to localise in the corpora quadrigemina a centre inhibitory of the secretion of sweat. Paralysis of the cervical sympathetic are found partly in ordinary simple cases, partly in the most complicated forms of disease, *e.g.*, often in phthisis, scrofulous disease of the glands, and in goitre; seldom in aneurism of the aorta, in caries of the cervical vertebræ, in muscular atrophy, and in diabetes.

Foa, in his methodical anatomical examinations of the ganglia of the cervical sympathetic, found changes therein very frequently; so that it seems as if we must attach more importance to the symptoms on the living patient than to the lesions found, which have not always been accompanied by symptoms before death. It cannot be regarded as accidental that in some cases of atrophy the face becomes of a vermilion colour, whilst the sweat is continually pouring down from it and the head. The diagnosis of *tabes dorsalis* is easy, if we find myosis well-marked on both sides; and we then also know, that the upper dorsal region of the spinal cord is already attacked. These cases run a rapid course, and are of worse prognosis than those in which the eyes are not involved. As regards diabetes, there is sufficient to show that it is a diseased condition of the processes of oxidation of the tissues; and, when disturbances of digestion, the action of poisons, etc., are struck out of the list of causes, there remain diseases and injuries of the nervous system to account for the condition, more especially injury of the two lower cervical and the first dorsal sympathetic ganglia. Extirpation of these in animals has produced melituria (Eckhard, Cyon, and Aladoff). The author recounts numerous examples of sympathetic disturbances in diabetic patients. Hyperidrosis of the head, hemicrania, and Graves's disease have particular relation to the cervical sympathetic. Nitzelnadel pointed out some years ago that the secretion of sweat is governed both by spinal as well as by sympathetic nerves; and the experiments of Vulpian, Luchsinger, Adamkiewicz, etc., show that secreting fibres run in the sympathetic as well as in its plexuses. Sweating after muscular exertion, and as a reflex result from cutaneous irritation, is not

taken into consideration in speaking of the head; but psychical influences take part in it, particularly in localised anidroses and hyperidroses, the origin of some of which is still very doubtful.

Gerhardt has observed hyperidrosis of the end of the nose, which has, in some people, existed since childhood. In many phthisical patients, perhaps accidentally, hyperidrosis of the region of the chin is also observed; and in middle and old age, unilateral hyperidrosis of the head is very common. Should neuralgia and hyperidrosis exist together, this will be only in the extremities, facial and occipital neuralgia being always dry. It is certain, however, that hyperidrosis may exist without any other symptom of trigeminal or sympathetic lesion, although in many cases slight glandular or other swelling, phthisis, or bronchocele may exist in a slight degree. Hyperidrosis seems to be a symptom-indicative of the anterior columns of the spinal cord being involved whilst the pupillary symptoms accompany usually posterior sclerosis (locomotor ataxy). Palpitation of the heart often accompanies the sweating, particularly if goitre exist. Some therapeutic hints may be obtained from these facts, especially when we remember that Katyscheff and Dobrotowsky recommend faradisation of the cervical sympathetic for inflammatory reddening of the membrana tympani; and L. A. Gordon, for hyperidrosis of the feet and hands, adopts a similar plan with success. The endermic and hypodermic methods of administering atropine ought to have a trial.

Until 1851, when Bernard discovered the influence of the sympathetic on the vessels of the head, hemicrania was considered a neuralgia of the brain or meninges, etc. Du Bois Reymond threw more light upon the subject in 1860. He pronounced hemicrania to be a lesion of the sympathetic, his grounds for this being that the face becomes pale, the arteries narrow and tense, the eyelids semi-closed, from spasm of the tunica muscosa. Möllendorf believed it to be due to paralysis of the sympathetic. Both these views were proved to be well-founded, and again therapeutic facts were discovered; *e.g.*, the inhalation of amyl-nitrite was found to cut short the attack. Specifics are of less service than those drugs which we know to be regulators of the vaso-motor nerves, *e.g.*, arsenic, large doses of quinine, potassium bromide, etc., bodily exercise, cold water cures, etc., are also serviceable. The author has not seen much benefit from the administration of guarana and caffeine.

Basedow's or Graves's disease had at first a great struggle for existence. In 1855, Koeber traced its origin to the cervical sympathetic. Its symptoms are invariably bilateral; those of more well-known lesions of the sympathetic are unilateral, and such lasting tachycardia does not occur in any other disease. Severe and depressing mental impressions are the causes of this disease, and the cortical portions of the cerebrum are the points which are most influenced by these. The favourable course which the lighter forms run is against the assumption of extensive anatomical alterations in the cervical sympathetic. In the severer forms other symptoms appear, in addition to those of tachycardia, bronchocele, and exophthalmos; for example, those described by Geigel as cerebral congestion with psychical disturbances, passive anasarca, attacks of diarrhœa, cough with serous expectoration, congestion of the liver with jaundice, etc. More than the sympathetic nerve must, therefore, be involved,

probably the vaso-motor centre; but the experiments of Brown-Séquard, Duret, and others, show that superficial lesions of the cerebrum (even of the dura mater in the parietal region only) react upon the ocular, auri-ocular, and facial fibres of the sympathetic. Eulenberg and Landois proved the existence of vaso-motor centres in the cortex of the dog's cerebrum which would have to be considered in localising the cause of this disease (*i.e.*, Graves's). Against such assumption, therapeutical facts can be recorded. Besides quinine and iron, digitalis, cold water, and tincture of veratrum viride (Sée), Von Dusch has obtained some renown for the galvanisation of the cervical sympathetic in the treatment of exophthalmos.

Lastly, neurasthenia is discussed, a form of disease which was formerly known under the terms 'nervousness', irritable weakness, etc., but has only lately obtained a definite character. It being of very multifiform nature in its symptoms, the different descriptions met with under various authors are easily reconcilable, but all agree in the particular that its situation is in the vaso-motor nerves. Runge found 97 per cent. of pure cases to occur in men. It may be considered the homologue of hysteria, appearing usually after the fortieth year. Persons who are exposed to great mental and bodily exertions, who have irregular and little sleep, whilst giving themselves up to the pleasures of life without restraint, suddenly break down, not to recover for many years. The commencement is usually heralded by an attack of fear, with an aura ascending from the thorax, precordial pain, palpitation, dyspnoea, sweating, and delusions. After these there are giddiness, cerebral oppression, and a constant desire to press the head with the hand, itching, and sometimes headache (in 20 per cent. of Runge's cases). The voice becomes faint and toneless; standing tires the patient or makes him giddy; refreshing sleep is out of the question, frightful dreams, electrical starting out of the sleep, lastly, awakening with dulled intellect being the substitutes. Others sleep well, despite the miseries of the day-time, but are as weak in the morning as the night before. Nearly all the patients suffer from different forms of giddiness, combined with terror; most frequently from agoraphobia, but also from fear of railway travelling (siderodromophobia, Rigler), of closed rooms (klitrophobia, Raggi), nyctophobia (Eyslein), etc. The author has three patients with the disease well marked, who only get this symptom when walking on asphalt, so that the number of 'phobias' which could be made out is quite incalculable. A certain degree of hypochondriasis is thus seen to exist in these cases. According to Runge, melancholia often also appears; and, in a case observed by the reporter, this and a dread of firearms were most prominent symptoms. Hemiplegia, apoplectiform attacks, and aphasia are possible concomitants, but recovery is the rule after from one to three years, though relapses are certain to occur if the original cause be not kept at a distance. A surgeon who has suffered from neurasthenia for many years, classifies his symptoms as follows. At the commencement:—
1. Palpitation; 2. Dull, oppressive feeling in the head; 3. Oppression in the nape of the neck; 4. Asthma; 5. Meteorism and diarrhoea; 6. Rheumatoid pains; 7. Weakness in the lower extremities; 8. Disturbed slumber. Later on, much the same. At present, the same, but improvement in all; sleep now quite regular, but the fear of some accident constantly before him.

It is remarkable, according to Gerhardt, how little use is made of the stronger vaso-motor regulators, *e.g.*, lead, atropine, ergot, digitalis, amyl-nitrite, in the treatment of this affection. C. Ludwig's dictum finds its application here, namely, 'that no poison in our treasury of drugs is capable of steeling weakened nerves permanently, or of quieting the over-irritable ones'. A regular mode of living, sufficient and regular sleep, exercise in the open, bodily labour, distraction in amusements, moderate cold water treatment, are of the only permanent benefit to the neurasthenic patient. Some little good may be got out of quinine, small doses of arsenic, valerian, potassium bromide, or, according to Beard, from general electrification and the use of the zinc compounds. The author saw some results from the use of bromide of camphor; but all these must be given alternately, with intervals, and in small doses.

F. WILLIAM ELSNER.

MEYER ON PAINFUL PRESSURE-POINTS.

DR. MORITZ MEYER (*Berlin. Klin. Woch.*, No. 31, 1881) has already called attention (*ibid.*, No. 51, 1875) to the indications for galvanic treatment obtained from the presence of painful pressure-spots along the spine. In the present paper, he re-states and illustrates this point, and extends his statement to pressure-spots discoverable along the whole course of the trunks and branches of nerves.

The first case adduced is that of no less a patient than Professor Westphal himself, who, in May 1880, had an attack of neuralgia in the right arm and shoulder. Dr. Meyer discovered a painful pressure-point at the upper part of the brachial plexus. An anode of ten cells was applied to it, and within five minutes the pain had considerably subsided. The repetition of the operation four times during the ensuing week was sufficient to effect a complete cure. In the next two cases, the result of the treatment is the more striking, that previously the patients had been subjected to galvanic treatment on the usual system.

A girl, aged 14, had for the last nine months suffered from severe pains in the fourth interosseous space of the right hand, extending upwards along the radial nerve, to the posterior edge of the deltoid. Most movements of the arm had become impossible. The galvanic current had been applied to the hand and forearm during several weeks. Dr. Meyer discovered a limited tender spot in the brachial plexus. The anode was applied over it, with the immediate result of enabling the patient to write a few words. Every successive application determined further progress; and, after the seventeenth, the patient was considered well. Subsequently, after excessive writing, there was a slight relapse, which rapidly gave way to the same treatment.

Another patient, aged 19, in consequence of an injury to the head of the ulna, for which she had worn a plaster bandage for six weeks, had, during two years, suffered from neuralgia in the ulnar nerve, which deprived her of the use of the arm. Every kind of treatment, including galvanism locally applied, had failed to give any relief. A tender spot was found at the lower part of the brachial plexus; and the treatment was accordingly conducted as in the previous case. Very soon the pain diminished, and the patient began to be able to extend and abduct the little finger. After twenty applications, she was able to paint, play the piano, etc. Writing

was still difficult, and the treatment was persevered in for another series of thirty applications, when she had practically recovered.

The following cases illustrate the indicative importance of pressure-points for galvanic treatment in other neuroses.

A patient, aged 27, had suffered for nine years from sick headache. The attacks were very frequent, chiefly in the left side. There was tenderness over the upper cervical transverse processes. The positive pole, of six elements, was applied to this spot on each side, the negative under the ear of the corresponding side, for three minutes. Thirty-five such applications, spread over three months, relieved her completely. A slight relapse after undue excitement and exertion, was overcome by a repetition of the treatment. There had been no relapse for the last four years.

A banker, aged 30, became affected with twitchings on the right side of the face. Pressure on the third and fourth cervical transverse processes was painful, and arrested the twitchings. Two courses of anodal galvanisation of the spots, successfully relieved the patient, who has been free from any symptom for the last twelve months.

In a third patient, a fall downstairs, two years previously, produced injury to the right scapular region; this was followed by a neuralgic condition of the shoulder and arm, with difficulty of breathing. Dr. Meyer found the motor points of the rhomboid (which was in a state of contraction) and the serratus magnus painful. Rapid recovery took place under galvanisation of these points.

Dr. W., aged 40, after a strain six years ago, lost power in the left arm, and experienced a sense of tightness in the left side of the thorax. He had been through a number of methods of treatment, external and internal, but without benefit. Two painful points were found: one over the seventh cervical spinous process, pressure upon which caused violent hiccupping; the other over the origin of the left phrenic nerve, from the third to the fifth left transverse processes. A short galvanic treatment of nine sittings of these spots brought about a marked improvement. Nothing remained, on the patient's compulsory departure from Berlin, beyond a vague sense of discomfort. Later news from the patient showed the improvement to be lasting.

On the strength of these and many other cases, the author insists on the necessity of carefully searching in all cases of obstinate neuroses for painful spots. Weak currents are indicated especially at first.

A. DE WATTEVILLE.

VERNEUIL ON ERYSIPELAS.

M. VERNEUIL, in a communication to the Paris *Société de Chirurgie* (*Revue de Thérapeutique Médico-Chirurgicale*, 15 Mars, 1882), points out that erysipelas has considerably diminished in frequency in hospitals. Formerly there was always erysipelas in surgical wards, but at the present time there are no longer seen in Paris those great epidemics and constant endemics of erysipelas which frequently arrested the hand of the surgeon. The antiseptic method has rendered great service in relation to erysipelas, but it has done still more with reference to septicæmia. At the present time, in fact, people still die of erysipelas.

We begin to know what is to be feared when we operate on a diabetic or alcoholic patient; but what

have we to fear when we operate on a patient who has already had one or several attacks of erysipelas? Do these previous erysipelatous attacks influence the prognosis of the operation?

M. Verneuil furnishes three cases, as a contribution to the study of this question. When he was a young surgeon, he was called to see a merchant suffering from alcoholism who had spontaneous erysipelas of the face, of which he was cured; it left, however, a swelling of the glands which persisted instead of becoming dispersed. Two or three months afterwards, an abscess was formed in the sheath of the sterno-cleido-mastoid muscle; he opened it. Two days later, erysipelas developed itself, invading the whole face, becoming complicated with delirium tremens, and ending very speedily in death.

In 1866, M. Verneuil was called in by Dr. Brown-Séquard to see a Creole, who had lived for some time in France, and who was attacked by osteitis in the foot: M. Verneuil found that two years previously the patient had had spontaneous erysipelas of the face. As he suffered from severe pains in the foot, M. Verneuil made subcutaneous injections of morphia. At one of the punctures erysipelas was developed, and invaded the whole of the leg; abscesses formed, and in one of the fistulous passages erysipelas occurred, which successively invaded the whole body. Some time afterwards, further and very intense inflammatory symptoms appeared; and amputation at the tibio-tarsal joint became necessary. The amputation was accompanied by considerable hæmorrhage. On the third day, erysipelas showed itself; then secondary hæmorrhage supervened, which necessitated ligature of the posterior tibial artery. The patient died on the evening of the next day.

M. Verneuil was consulted by a man, aged 51, in strong health, very tall and fat, who had been operated on by M. Cusco for an epithelioma of the lip. There was an enlarged submaxillary gland. At Vichy, this man had had an eruption of eczema on the thigh. In September he had, without any apparent cause, erysipelas of the face; it was cured in nine days. M. Verneuil operated on his gland, at the end of September, in his own country house, under excellent hygienic conditions, one Sunday, without having previously visited the hospital, having new instruments, and assisted by two colleagues, who, at that time, had not a single case of erysipelas among their patients. He applied the antiseptic method in all its rigour. Four days afterwards, the patient had a rigor; there was lymphangitis of the right arm, then phlegmonous erysipelas of the right arm and the left leg, which necessitated several incisions. On the third day, he had severe sore throat, which seized on the cheeks: he had erysipelas of the face of pharyngeal origin, to which he succumbed twenty-three days after the operation.

It becomes a question whether there is a special pathological condition determined by repeated attacks of erysipelas. We know that in certain regions, in Brazil, for instance, attacks of lymphangitis are very frequent. M. Verneuil knows a woman who has had seventy-nine attacks of erysipelas of the face. What, then, are the risks run by the surgeon who operates on the patient who has had one or several attacks of erysipelas? The recurrence of erysipelas in the same region may possibly be explained by anatomical conditions. But the difficulty is how to explain the recurrence of erysipelatous attacks at a distance.

ESMARCH ON THE TREATMENT OF INJURIES OF THE BLOOD-VESSELS IN WAR.

THE following is the substance of a paper read before the section of Military Surgery in the International Medical Congress held in London in August 1881.

1. The indications for the treatment of injuries to the larger vessels, and for traumatic hæmorrhage, have been materially simplified by antiseptics and artificial bloodlessness.

2. Ligation of the trunk of the artery above the wound, formerly practised, is uncertain, and therefore should be abandoned, especially when the tissues are infiltrated by inflammatory exudation.

3. Styptics should also be abandoned, since they are uncertain in their action, and, by rendering the wound dirty, retard its union.

4. In every case of hæmorrhage threatening life, the injured vessel must, if possible, be laid bare at the injured spot, and tied above and below with catgut or antiseptic silk.

5. The operation must be conducted strictly antiseptically and, in the case of the extremities, by the aid of artificial bloodlessness (Esmarch's bandage).

6. The chief means of making such operations easy lies in making a long incision, which lengthens the wound in the long axis of the limb. When life is concerned, it matters little whether the incision be an inch or a foot long; as, if it succeed in checking hæmorrhage, and be conducted thoroughly aseptically, a long incision heals just as well as a short one.

7. A proper incision having been made through the skin, the deeper tissues are laid open, the left forefinger being used as a director, upon which they are divided to the same extent by a blunt-pointed bistoury. They are then held apart by either blunt or pointed hooks.

8. Coagulated blood is now quickly and energetically removed, either with fingers, sponges, or raspatories, and as thoroughly as if it were intended to make an elaborate dissection. The coagulated blood covers everything, and is a fertile soil for the noxious matters exciting inflammation.

9. This being accomplished, the vessels and nerves are felt for with the finger, and an endeavour is made to get some idea as to the nature of the injury by the aid of the cleansing sponge, with which arteries, veins, and nerves are isolated.

10. If the veins be quite bloodless and collapsed, it is difficult to distinguish them from cords of connective tissue; it is therefore advisable to form a reservoir of blood below the wound by placing a ligature round the hand, for example, before applying the elastic bandage to the arm. Afterwards, on elevating the limb and removing the ligature, the blood flows out of the injured vein, if the vessel have been such.

11. If the injured part of artery or vein have been found and exposed sufficiently to enable the whole extent to be seen, the vessel must be isolated and tied, above and below the injury, in a healthy situation, securely and tightly, with catgut or antiseptic silk (reef-knot). The vessel, if not already divided by the injury, is then cut between the ligatures. If any branches be found between the ligatures, they are isolated and tied, and separated from the trunk of the vessel.

12. The tubing is now released, and all remaining vessels from which any blood issues are ligatured;

the limb being elevated, as in amputations when the tubing has been removed, to lessen the parenchymatous bleeding.

13. Divided nerves and tendons, should they be found in the wound, are to be united by fine sutures of carbolised silk or catgut.

14. Foreign bodies, *e.g.*, bullets, fragments of clothing, very loose bone-splinters, should be carefully removed.

15. The whole wound is then disinfected most carefully by washing, rubbing, and rinsing with solutions of chloride of zinc and carbolic acid, or iodoform-spray. An endeavour must be made to penetrate into every crevice of the wound.

16. Counter-openings having been made in suitable situations, and drainage-tubes introduced, the wound is closed by antiseptic sutures and covered by antiseptic dressing.

17. The performance of this operation is not suitable to the battle-field, because it requires much calmness, time, and care; and because the antiseptic precautions can only be observed in a well-constructed lazarette.

18. For provisional hæmostasis on the battle-field, elastic compression is alone suitable.

19. The use of styptics is to be forbidden, therefore such articles as perchloride of iron, Pinghawar Yambi, etc., should be left out of the dressing materials.

20. Equally injurious and dangerous are the much used tourniquets, not only because they require a certain amount of anatomical knowledge in their application, but because the pad (be it ever so well adjusted) becomes displaced during transport, and so only checks the venous circulation instead of the arterial; the result being dangerous infiltration if the opening of the wound be closed, and recurrence of hæmorrhage if it be open.

21. Satisfactory and lasting compression of the vessels is obtainable by an elastic tube or girth being drawn round the limb several times, tightly stretched. By this means the soft parts are so well drawn together, that not a drop of blood can pass through the vessels.

22. No anatomical knowledge is requisite, as the compression is useful wherever undertaken. Displacement of the tube or girth is impossible in transport, if the ends have been well secured.

23. Tourniquets should therefore be replaced by elastic girths in the stores and in the dressing-bags of the men of the hospital corps.

24. Since caoutchouc suffers by being stored, and loses its elasticity, it is impossible to keep a store of these girths in the magazines; and, in the event of war, contracts would be badly carried out.

25. I have, therefore, given a necessary article of clothing the construction necessary for its double use as a brace and as an elastic tourniquet.

26. This tourniquet-brace consists of an India-rubber girth 150 centimetres (nearly 2 feet) long, and is strong enough to compress every vessel in a limb at any point.

27. Since every soldier must have a pair of braces, and this one is not dearer than any other, the desire that each soldier should be so equipped in war is a reasonable one.

28. In this case, every soldier would carry a means of checking a dangerous hæmorrhage, in himself and others, on his own person. In case of a severe injury he would, in any case, not require braces; and on the field of battle the braces of the dead and

wounded could be removed in great numbers if necessary.

29. These braces might also be used for tying-off poisoned wounds, for procuring artificial bloodlessness in operations, and for the resuscitation of the apparently dead after severe losses of blood, etc.

30. It is a matter of course that every wounded man, in whom hæmorrhage has been provisionally checked by the girth, should be brought to a lazarette as soon as possible, in order that the compression may be there removed, and the definite ligature of the bleeding vessel carried out.

31. It is also of importance that, before applying the elastic tourniquet, the limb be bandaged in an elevated position; and, if bones be shattered, that these should be rendered immovable during transport, by means of splints, etc.

F. WILLIAM ELSNER.

CAZIN ON THE DIAGNOSIS OF HIP-DISEASE BY RECTAL EXAMINATION.

DR. H. CAZIN (*Rev. de Chir.*, March 1882) refers to the difficulty of diagnosing the exact seat of the disease, especially with regard to the acetabulum. This difficulty is of much importance when the question of resection has to be considered, and is one of the strongest points of argument advanced by the opponents of resection. The author made researches in 98 cases of hip-joint disease, 64 being suppurative and 34 non-suppurative. Hitherto, only incomplete evidence has been obtained by depending upon the seat of the pain, the seat of abscesses and fistule, and by exploration with the sound.

Abdominal palpation enables us to detect enlarged iliac glands or pelvic abscesses; but if we also examine the patient through the rectum, the diagnosis will be much more sure. The hip-joint, from its deep position in the tissues, is not very accessible to ordinary methods of examination, but the finger can approach it most easily through the rectum. In the cavity of the pelvis, immediately above and a little behind the obturator foramen, is a quadrilateral surface of the bone, corresponding with the bottom of the acetabulum. In a child under fourteen years of age, this part of the pelvis is partly cartilaginous. The Y-shaped cartilage is so situated that the area of the base of the acetabulum is divided by a transverse line of cartilage into two equal parts, and the lower half is again divided by the horizontal line of cartilage.

In examining a patient, the natural extent of the cartilage should be considered, and the two sides should always be explored for the sake of comparison. This mode of examination has afforded appreciable results in 49 of the 98 cases which Dr. Cazin has had under observation. Of the 64 cases of suppurative hip-joint disease, positive results were obtained in 37. Of the 34 non-suppurative cases, in 12 only was the examination *per rectum* diagnostic. The ages of the patients were between three and eighteen years, and the majority were between eight and ten years; 41 were boys, and 23 girls. Examination *per rectum* disclosed an alteration in the pelvis in 36 of the cases. Sex has no importance with regard to the facility of examination. Among the elder girls, the presence of the uterus has caused very slight trouble, and the position 'on the knees' has facilitated the examination. In young adult females, recourse should be had at the same time, or exclusively, to examination *per vaginam*.

The results of Dr. Cazin's examinations have been verified six times by resection, four times by necropsy, and twice by resection and necropsy combined.

The symptoms elucidated by a rectal examination have been pain localised to the postcotyloid surface, produced by pressure; enlargement of the intra-pelvic glands; thickening of the bone; depression, flexibility, mobility, destruction, or perforation of the postcotyloidean surface; congestion of the soft parts; and pelvic abscess.

Pain upon pressure is the least certain of these symptoms. If the bone be penetrated, and the head of the femur be felt by the finger, a doubt in diagnosis may be removed if upon movement of the thigh the head of the femur is felt by the finger (*per rectum*) to move. Many cases are recorded. One was the case of a girl, thirteen years old, in whom there were some symptoms of hip-joint disease, but it was thought by one of Dr. Cazin's colleagues that contraction of the muscles was the only affection. Under chloroform the deformity disappeared, and the joint became freely movable; and it was only by a rectal examination, which disclosed a postcotyloidean swelling, that Dr. Cazin was convinced that articular disease existed. In conclusion, Dr. Cazin urges the adoption of this means of diagnosis, in addition to other methods, especially in reference to the subject of excision of the joint. He also maintains that *redressement forcé* should never be attempted until an examination *per rectum* has been made.

The only other surgeons who, Dr. Cazin states, have referred to this method of diagnosis in hip-joint disease are Mr. Holmes, in his work on *Surgical Diseases of Childhood*, and MM. Mathieu and Strauss, who have quoted Mr. Barwell.

E. NOBLE SMITH.

URBANTSCHITSCH ON THE APPRECIATION OF SOUND.

AN article on this subject, by Victor Urbantschitsch, appears in Pflüger's *Archiv für die Gesamte Physiologie*, Band xxiv.

1. *On Exhaustion of the Ear*.—A passing diminution in the acuteness of hearing occurs both in over-exertion by listening, as well as after the action of prolonged impressions of sound upon the ear. Having related the experiments of Dove and J. J. Müller in this department, the author shows that by the use of the sounds of a tuning-fork, which are carried to the ears alternately by India-rubber tubing, we can hear the sound produced and allowed to die away, on the one side, several seconds after it has ceased to be appreciated by the ear first acted upon (directly) on the other. The exhaustion of the ear, however, is confined to the one tone, and the same group of tones which caused the exhaustion; other tones being appreciated by the exhausted ear just as well and unchanged as by the unaltered one. An exhausted ear recovers its function in from two to five seconds.

2. *On the Subjective Field of Hearing*.—In addition to the observations of Purkyně, Thompson, and Plumondon, that by binotic conduction of one tone the perception of the same was referred to the occipital or frontal region, Urbantschitsch found by his experiments that these varying observations are accounted for, in the one instance, by the individual differences in the persons examined, in the other, by the choice of test-tones of different pitch and loud-

ness. In one case, the tone will be appreciated equally loudly in both ears; in another, in the right or left temporal region, or even in the middle line of the head. The utmost limits of the subjective field of hearing are—the front occipital, and, from above downwards, the fronto-laryngeal regions. These limits were taken up on the one side by the lowest, and on the other by the highest test-tone. If two different tones be used in the experiment, of which each possesses its separate field of hearing, we do not thereby obtain an acoustic combination; but each tone is perceived separately in its own region. As regards sounds, there is thus a great variety in the localisation of the subjective field of hearing.

3. *On the Positive Acoustic After-Images.*—Hitherto the only after-perceptions, in the same sense as optical after-sensations, known, were those grounded on exhaustion, corresponding to the negative optical after-sensations; but by Urbantschitsch's experiments, the existence also of positive acoustic after-images has been proved. They are divided by him into two groups: 1. Primary, in which the subjective after-sensation is so intimately bound up with the preceding objective note, that both only produce a single uninterrupted hearing-impression; 2. Secondary, in which there is a pause between the disappearance of the objective note and the appearance of the acoustic after-sensation. The duration of the acoustic after-images, which generally appear fifteen seconds after removal of the exciting note, is usually five to ten seconds. Different objective notes are perceived in the moment of after-perception, not as combined notes, but separated the one from the other. The researches of the author go to prove that the acoustic phenomena observed by him are to be designated as 'positive acoustic after-perceptions' (analogous to the optical after-images), and are to be well distinguished from the voluntary and involuntary acoustic remembrance-pictures which turn up and rest on a psychical process, and are certainly not true acoustic sense-perceptions (Fechner's pictures of sense-remembrance).

F. WILLIAM ELSNER.

JAKSCH ON THE RED COLOUR PRODUCED IN DIABETIC URINE ON THE ADDITION OF CHLORIDE OF IRON.

EVER since Gerhardt directed attention to the fact, it has been well known that, in many cases of diabetes, the urine became red on the addition of chloride of iron. The substance to which this reaction appears to be due is usually known under the name of ethyldiacetic acid. On the addition of water it breaks up into acetone, alcohol, and carbonic acid; and as these substances are frequently present in diabetic urine, Gerhardt supposed that the substance to which the red reaction of the urine is due subsequently broke up into these three.

There are, however, other substances which, when present in urine, lead to a similar coloration on the addition of chloride of iron, among which may be mentioned salicylic acid and its salts. To distinguish the reaction of ethyldiacetic acid from that of other substances, Von Jaksch (*Zeitschr. für Heilk.*, Band iii) points out (1) that, when the urine is boiled for five or six minutes, the ethyldiacetic acid becomes decomposed, and no longer gives the red reaction; and (2) that, when that substance is extracted from the urine by shaking with ether, and the

etherial solution rendered red by the addition of the salt of iron, that red colour disappears gradually after standing for a few days. These reactions are sufficient to distinguish ethyldiacetic acid; but a good many others are given, for which the original paper must be consulted.

The results of the clinical examination of a large number of urines are given with some detail. In regard to the iron reaction in diabetic urine, Von Jaksch points out the following facts. 1. In all cases where the patient died comatose, the urine gave the reaction. 2. The reaction occurred very frequently without any coma being present. Its presence does not depend upon diet, and particularly not upon the meat-diet of diabetics. 4. Neither the administration of such medicines as Carlsbad water, cod-liver oil, lactic acid, mannit, lichenin, nor of ethyldiacetic acid or acetone, caused the appearance of the red reaction in the urine.

Not only in diabetes, but also in scarlatina, measles, and other acute exanthemata, the author detected the presence in the urine of the substance which gives this red reaction.

J. GRAHAM BROWN, M.D.

BALDWIN ON THE POISONOUS PROPERTIES OF QUININE.

DR. W. O. BALDWIN (*Med. Gaz.*, Oct. 22) gives the following cases. The first case that led him to suspect that quinine was capable of producing poisonous effects, occurred in his own household. A manservant, coloured, aged 30, had an attack of acute pneumonia of the right lung, on the 25th October 1845, whilst Dr. Baldwin was temporarily absent from home. He was attended by a professional friend, who made copious notes of the case, from which it appears that the pneumonia was at no time violent. The patient commenced taking quinine at 5 o'clock P.M. on the 27th, and continued it until 1.30 P.M. on the 28th, during which time he took 68 grains. One and a half hours after the last dose of quinine, the doctor was called in and saw him at 3 P.M. He had a little while before been seized with a jerking motion of the whole body, which lasted several minutes, and immediately his vision was so imperfect that he could scarcely distinguish anything. The whole surface was hot; respiration was irregular, from 11 to 20; pulse 100, full. The temporal veins were turgid, and the temporal artery throbbing. He had great restlessness, anxiety, and alarm; his thirst was increased, his tongue more dry; his pupils dilated. He dozed two or three minutes at a time, then started up, breathing more quickly and audibly. Cough was frequent and dry; the respiratory murmur was heard over the greater extent of the whole lung. The convulsive movements of the body came on every ten or twelve minutes, sometimes apparently of the whole body, at other times confined to the arms. He was not insensible during the convulsions, nor was there foaming at the mouth, but occasionally a staring and vacant look, and rolling up of the eyes. By half-past 4 o'clock he was completely blind. His vision began to improve in about twenty-four hours, but it was never fully restored while Dr. Baldwin kept sight of him, which was about twenty years.

The agency of the quinine here, in producing blindness, convulsions, etc., is, Dr. Baldwin says, certainly most manifest. It was commenced at 5 o'clock on the evening of the 27th, and continued

until 1.30 o'clock P.M. of the 28th, being 20½ hours from the first dose to the last, during which time 68 grains were introduced into the system, the pernicious influence of which was visible one hour and a half from the last dose. The restlessness, tremors, slow and irregular breathing, dilatation of the pupils, blindness and convulsions, all supervening at the time they did, indicate most pointedly and conclusively the poisonous operation of the quinine.

The next case that led him to think that quinine was capable of producing poisonous effects, was one in which convulsions, blindness, and death, followed its use, when he supposed his patient to be convalescent. This was an attack of tertian remittent fever, which occurred in July 1846, in a negro girl, aged 6 years, living in a swampy and malarial district of country. The paroxysms came on early in the morning, and declined in the latter part of the succeeding day. He saw her on the fifth day of her disease, and during the earlier part of her third paroxysm of fever. Her bowels had been evacuated, and she had taken moderate doses of quinine during her last remission of fever. On the days of the exacerbation of fever, her pulse rose to 160, and during the remissions fell to 120. Within the first twenty-four hours after seeing her, he gave her 2 grains of quinine, at intervals of two hours, until 10 grains had been given, and repeated the same doses at intervals of four hours until a like quantity had been taken, making 20 grains within forty-eight hours. At his visit on the third day of his attendance, he found that the exacerbation of fever had not come on, though she was suffering from extreme restlessness, from what he supposed to be a high state of quininism, but almost free from fever. He therefore determined to withdraw the remedy, and gave directions to that effect. On returning next morning he found, to his great surprise, that his patient was dead; and the nurse gave the following account of her.

Soon after Dr. Baldwin left on the previous day, the nurse found her 'in a free, warm, and general perspiration, which lasted three or four hours'. On discovering this, he concluded she was in a good condition for taking quinine, and gave her 4 grains, and repeated the dose three hours afterwards, making 28 grains in all, during a period of something less than two days and a half. Shortly after he gave her the last dose, her skin became dry, succeeded by increased restlessness. About 6 o'clock she had a convulsion. After this, he noticed that the pupils of her eyes were dilated, and soon discovered she was totally blind. When asked if she knew her mother and other persons who were placed before her in a bright light, during the intervals of her convulsions, she would roll her eyes about—apparently endeavouring to fix them on some object—and then she would say, 'I can't see them'. The dilatation of the pupils, blindness, restlessness, convulsions, etc., continued until 8 o'clock, when she died.

Dr. Baldwin could not make a thorough *post mortem* examination, his patient being five miles from the city. Consequently, he made a partial one only of the stomach and bowels. Considerable vascularity was found in portions of the small intestines and stomach, the former containing of a yellowish and greenish substance intimately blended with mucus; no worms. The pupils were enormously dilated.

A review of this case left no doubt upon his mind of the direct agency of the quinine in producing death. The quantity given immediately before death (8 grains) would not of itself have produced the

fatal result, separate from the agency of that which had been given previously; but it must be remembered that, at the time when these last portions were given, the system was still charged with quinine to the extent of cinchonism; for up to 4 o'clock that morning it had been regularly introduced into the stomach, at intervals, for nearly two days. The accession of fever, which should have taken place on the day before, was prevented. The patient either died from the effects of the quinine; or the paroxysm of fever, which had been arrested or suspended, supervened on the day of her death and killed her. The latter could not have been the case, for an hour or two before she commenced taking the quinine (the last time), she was in a warm, free, and diffused perspiration, and evidently cinchonised. The most conclusive evidence, however, that the quinine killed the patient, is the characteristic train of symptoms which immediately followed its administration and preceded death, viz., the extreme restlessness, dilatation of pupils, blindness, and convulsions.

In other accidents of the kind which have been reported by authors, the symptoms do not differ in any prominent particular. The reader is especially referred to an article in the twenty-sixth volume of the *Dictionnaire de Médecine*, on Quinquinia, by Guersant, where several cases of the kind are recorded as having occurred under the observation of M. Trousseau, Dr. Guicometti, and others.

BINZ ON ANTIPYRETIC MEDICINES: THEIR ACTION AND USES.

PROFESSOR BINZ, in a paper read before the International Medical Congress, 1881, says:—

1. In the present state of our knowledge, there are two modes in which antipyretic remedies may be conceived to operate: first, by increasing the discharge of the pyrexial heat; secondly, by checking its production.

2. The quantity of heat discharged may be augmented by direct withdrawal (tepid water), or by facilitating the circulation through the skin (digitalis, cutaneous irritants).

3. The production of heat may be lessened by repeated cooling of the surface, and especially by the internal use of antizymotics.

4. Febrile diseases commonly owe their origin to the introduction and rapid development of substances akin to ferments. Several of these have been shown to resemble yeast in being low vegetable organisms, or derived from such organisms. They enter the glands, where they undergo multiplication, increase the metabolic processes, generate products of decomposition which exert a paralyzing action on the nervous system, and raise the standard of temperature throughout the body.

5. Owing to impaired action of the heart in certain stages of the disorder, or to contraction of the cutaneous vessels, the skin becomes anæmic, and gives off less heat than usual. The internal temperature rises accordingly.

6. Quinine, our chief antipyretic, acts by directly combating the efficient cause of the disorder, and by checking the abnormal metabolism going on in the body. The nervous system takes no part, or only a secondary part, in this operation. In intermittent fevers, quinine prevents the paroxysms by attacking their infective cause. The paroxysms are not the essence—the substantive element—of the disease; they are only a symptom of it. The substantive

element is the poison deposited in the colourless corpuscles of many organs, especially the spleen. There are fevers without paroxysms, and paroxysms without fever. It is just those intermittent fevers which run their course without paroxysms that are the most malignant. The malarial poison rapidly causes disintegration of the tissues and the blood, and so paralyses the nerve-centres.

7. The reduction of acute splenic tumours by quinine depends upon the adverse influence exerted by the alkaloid on the infective poison to which the morbid over-action of the spleen and its consequent enlargement are due. '*Cessante causâ cessat effectus.*' Even a healthy spleen may be reduced in size by large doses of quinine; the alkaloid vigorously checking the oxidation of its principal elements, the colourless corpuscles. Quinine has no direct influence on the vaso-motor nerves.

8. Quinine attacks the malarial poison with especial energy; on this fact depends the so-called specific action of quinine in intermittent fevers. The same relation, but in a minor degree, subsists between quinine and the infective poison of enteric fever, between mercury and iodine and the poison of syphilis, between salicylic acid and the 'irritant' in acute articular rheumatism.

9. An antipyretic which, in one disease, instantaneously arrests the fever, may be wholly powerless in another. The difference depends on the fact that the various antizymotics act very unequally on the individual schizomycetes and ferments; one will paralyse them rapidly, by another they will hardly be affected.

10. The past history of therapeutics, and recent achievements in the domain of etiology and pharmacology, entitle us to assume that, by persistent scientific inquiry and practical observation, we may succeed in discovering a specific antidote for every species of infective or septicæmic malady.

FERNET ON DIGITALIS IN CARDIAC DISEASES.

AT a meeting of the Société de Thérapeutique in Paris, M. Fernet submitted his views on the use of digitalis in heart-disease, accompanied by valvular lesions (*Jour. de Thérap.*, May 25). He said that, whatever may be its physiological action, the effects of digitalis administered to certain patients with cardiac affections are really reduced to the slackening of the contractions of the heart, to the regulation and the augmentation of energy of these contractions, and, finally, to the increase of the amount of urine. The decrease or disappearance of the visceral congestions, dropsies, and all the concomitant symptoms, depends on the modifications of the circulation. Digitalis is, therefore, indicated in cases in which the contractions of the heart are hurried, irregular, unequal, and in which the quality of the urine is notably decreased. In aortic disease, the muscular structure of the heart is slowly attacked, the pulse is full, regular, and equal; there are no visceral congestions nor dropsies; the urine is copious. Palpitations and breathlessness supervene under the influence of fatigue, effort, and emotion. These symptoms are soothed by rest, the use of bromide of potassium, or morphia. Digitalis is not indicated. In the ultimate asthisia of aortic lesions, digitalis would be dangerous, whilst tonics and stimulants are specially indicated. In mitral disease, digitalis

is useless at the compensation period, and should be reserved for the astyolic, or, rather, as M. Fernet terms it, the dyssystolic period. Towards the end, when the heart is definitively astyolic, digitalis cannot produce a better utilisation of strength which no longer exists. It is by tonics, stimulants, and, notably by morphia or subcutaneous injection of ether, that the struggle may be prolonged. Gubler, who discerned very various morbid states lying behind the astyolic symptoms, some corresponding to ataxy, others to paralysis, united the former under the name of cardiataxy, the latter under that of cardioplegia. He pointed out that digitalis is useful only in cardiataxic disorders, and is powerless, or even injurious, in cardioplegic diseases. Amongst preparations of digitalis, M. Fernet prescribes by preference the infusion of leaves in doses of 20 centigrammes to 150 and 200 grammes of water, taken several times during the day between meals. Small doses are sufficient, and act as well as large doses, without any danger of poisoning. The infusion should be administered during from four to five days only. During the two or three first days of treatment, no appreciable effect is observed. The action of digitalis first shows itself by the regulation of the pulse, which precedes diuresis generally from fifteen to eighteen hours. This happens most often suddenly during the night, between the third and fourth days, when the patients are submitted to the product for the first time. On the days when the digitalis is suspended, the diuresis persists and even increases, to reach its maximum on the fifth day. The patient then evacuates five or six pints of urine. The diuresis is, as it were, the touchstone of digitalis; the urinal, according to M. Fernet, is to certain mitral diseases what the thermometer is to febrile diseases. Dyssystolic symptoms reappear, as soon as the patient excretes less than one litre of urine in twenty-four hours.

SQUIBB ON MEDICATION BY SALICYL COMPOUNDS.*

THE recent discussion by the Medical Society of London on the use of salicyl compounds in rheumatism brings forward anew two or three important points, which it leaves unfinished. 'More than a thousand cases of rheumatic fever' were treated with salicyl compounds, embracing salicine; salicylic acid made by Kolbe's process, from carbolic acid; salicylic acid made from oil of wintergreen; and salicylate of sodium made from Kolbe's salicylic acid. Toxic symptoms occurred in a considerable proportion of the cases treated with the Kolbe acid, and with salicylate of sodium made from that acid; but in the large number of cases reported by Dr. Latham of Cambridge, where the acid made from oil of wintergreen was used, these toxic symptoms were practically absent. This led to or strengthened the inference that there were impurities in the Kolbe acid, which produced these disagreeable symptoms. In the *Pharm. Jour. and Trans.* of April 6, 1878, p. 785, Mr. John Williams, F.C.S., shows conclusively that there is, or was at that time, another acid occasionally or commonly present in the Kolbe acid to the extent of 15 to 25 per cent., and that this acid formed a contaminating sodium salt. In the subsequent discussion of the subject, this acid and its sodium salt were very generally believed to be the sources of the toxic symptoms.

* *Ephemeris of Materia Medica*, vol. i, No. 3, May 1882.

The experience in America has, in a desultory inexact way, confirmed this, although within this writer's observation it has been sometimes difficult to decide whether the toxic symptoms were due to over-dosing, or to the contaminating acid. As a rule, salicyl compounds are rapidly eliminated, and, therefore, the effects are of comparatively short duration. This point has been too much overlooked in the use of these compounds, especially in Great Britain. It leads directly to the necessity for moderate doses frequently repeated. The English practice, as deduced from the late discussion, seems to have been to give from 60 to 180 grains in the twenty-four hours, divided into three or four doses, occasionally in six doses, and still more rarely in eight doses. In the United States, the best practice seems to have been in better conformity to the rate of elimination, for it is common to hear of its use every two hours, or every three hours—that is, twelve, or eight times in the twenty-four hours. The doses of either the acid or the sodium salt are, perhaps, usually 20 grains at first; then 15 grains until the pain begins to abate, and then 10 grains or less; but always with frequent repetition. Such practice would indicate that somewhat less of the medicine is used in a given case, but in larger doses at first, and always more frequently repeated. The acid, however pure, is more apt to disturb the stomach primarily than the sodium salt; but in equivalent doses they seem equally liable to produce perversion of the special senses and delirium. Ringing in the ears seems to be for salicyl compounds, as for quinine, the indication of saturation, or of full physiological effect. Next comes disturbed or perverted vision, and finally delirium. If, as with quinine, the dose be reduced on the first appearance of ringing in the ears, the other symptoms will not occur, and the medicine need not be suspended. The parallelism with quinine, strychnia, atropine, etc., is also noticeable in the circumstance that, when the full physiological effect is reached, larger or more frequent doses are hurtful or toxic; and of still more importance the circumstance that the full physiological effect is reached in different persons by widely different quantities. This latter consideration is so often neglected in therapeutics that the stated doses of medicines are not regarded simply as quantities to begin with, but are carried from patient to patient, and throughout case after case, without regard to differences in individual susceptibility and individual rates of elimination. If in two persons equally susceptible to a medicine—say salicyl compounds—the rate of elimination be different, either naturally or temporarily, the same full physiological dose will in one case be therapeutic only, while with slower elimination it will be cumulative until a toxic explosion occurs.

Hence, in any consideration of the toxic effects of salicyl compounds, it is manifestly unsafe to charge them all to impurities in the medicine, when idiosyncrasy brings into operation two other important causes of similar effects, namely, different susceptibility and different rate of elimination, under which conditions the moderate or small doses of one case become excessive in another.

While, then, it may be fairly assumed that, in a proportion of the cases where the medicine had to be suspended on account of toxic effects, these were due to over-dosing, yet a very large proportion may be as fairly attributed to the contaminating acid.

In some rather roughly made observations on the

subject, soon after Mr. Williams' paper was published, the writer came to the conclusion that the contaminating acid was most largely present in the amorphous acid, and that in well crystallised acid it was not present to the extent of more than six to eight per cent., and further, that sublimation freed the salicylic acid from this contaminating acid. Within the last two years, however, the markets have been supplied for those who chose to pay for it with a well crystallised acid, which does not contain more than three or four per cent. of all impurities. Such an acid is all that can be needed for medical uses, and is quite as pure as any made from oil of wintergreen; and any toxic effects from such an acid, or from the sodium salt made from it, must be due either to idiosyncrasy or to mismanagement. A well made sodium salt from such an acid is always white, but after being shut up long in a bottle is liable to have a faint odour of carbolic acid. This, however, should be so faint as only to be perceptible on close examination, and should not be perceptible after exposure to the air for a time, nor in the solutions.

The salicylate of sodium having now pretty generally, and very properly, superseded both salicine and salicylic acid for medicinal uses, it becomes quite important to know when it is of good quality. This is the more difficult, because its appearance and sensible properties give no indication, and because any chemical examination or testing, in order to be conclusive, must be elaborate and troublesome. It is made by the careful saturation of a solution of a pure carbonate of sodium with good salicylic acid, and the evaporation of the solution to dryness by a carefully regulated heat, with constant stirring. The process, though not difficult, is tedious and troublesome, and, therefore, with the proper skill is rather expensive. The salt is never used in substance, but always in solution, and, therefore, when redissolved, all the trouble and expense of the drying process is lost. Therefore, as salicylic acid is much more easily judged, both by appearance and by tests, than salicylate of sodium, and is much easier to get of assured quality, it is far better to save all risks of impurity and expense by making the solution for use as wanted. That is, each pharmacist or physician should make it for himself extemporaneously as wanted. Several formulæ have been published by which to do this, but all have needed the detail necessary to those who might not be accustomed to such work.

Each 100 parts or grains of medicinal salicylate of sodium consists of about 89 of the acid and 11 of sodium, both elements taken as hydrates; and the average dose of the salt to begin with, or to test the susceptibility of a patient, is 20 grains every two hours. The average case of acute rheumatism will, perhaps, require the use of the salicylate for fifteen days, at an average of 80 grains a day, or 1,200 grains in all, consisting of 1,070 grains of the acid and 130 grains of base. This is best made up by using an ounce-bottle of salicylic acid at a time, about $2\frac{1}{4}$ ounces being needed to the average case. The ounce-bottle of acid will contain about 437 grains, and this will require about 270 grains of bicarbonate of sodium, and will yield about 490 grains of the salicylate of sodium. A very convenient solution is one which contains 10 grains in each fluid drachm; and of such a solution, one avoirdupois ounce of acid would make six fluid ounces and one fluid drachm. This is easily and quickly made by the following formula. Take of salicylic acid, well crystallised, 437 grains; bicarbonate

of sodium, 270 grains; water, free from iron, a sufficient quantity. Put the acid into a vessel of the capacity of a pint, add four fluid ounces of water, stir well together, and then add the bicarbonate of sodium in portions, with stirring, until the whole is added and the effervescence is finished. Filter the solution, and wash the filter through with water until the filtered solution measures six fluid ounces, or 180 cubic centimètres.

This solution contains 10 grains of the medicinal salicylate of sodium in each fluid drachm.

If made from good materials, the solution before filtration is of a pale amber colour; but, as most ordinary filtering paper contains traces of iron, the filtered solution is often of a deeper tint. Owing to the varying proportions of hygrometric moisture in the materials, the solution may not always be perfectly neutral, but it must be nearly so, and quite near enough for all practical purposes, as both elements are medicinal in the same direction. When the alkaline base is in excess, however, the solution soon becomes of a much deeper colour. The carbonic acid (carbon dioxide) present in the solution is not only of no disadvantage, but is a positive advantage, since it improves the taste, and renders the solution more acceptable to the stomach. It, however, interferes with the testing by litmus paper for the neutrality of the solution, unless the moistened paper, both blue and red, be exposed to the air a short time before judging of the coloration.

In this way, an ounce of crystallised salicylic acid, costing, say, twenty-five to thirty cents, and the bicarbonate of sodium, costing less than one cent, will make about 480 grains, or 1.1 avoirdupois ounces of the salicylate, and any physician or pharmacist can make the solution.

In common with other bitter and nauseous salines, it is best taken simply diluted with ice water. A mouthful or two of ice-water before and after the dose to blunt the sense of taste, and the dose between them in the proportion of two fluid drachms of the solution in a wine glass full of ice-water, renders it easily taken by most persons. In acute cases, it should be taken every two hours at first, or in urgent cases every hour, until very moderate saturation occurs. Then the dose should be diminished before the intervals are lengthened; and, finally, the intervals should be lengthened, first to three hours, and then to four hours, but it should not be omitted until the usual time and risks of relapse are past. In chronic cases, one fluid drachm of the solution every two or three hours during two or three days will probably do all that the medicine is capable of if the patient have the ordinary susceptibility; but it cannot fairly be said to have failed until the full physiological effects have been obtained without abatement of the symptoms.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. FORSTER.—*Veratrum Viride* in Cardiac Irritability. (*Brit. Med. Jour.* April 1882, p. 534.)

2. MACKENZIE.—The Treatment of Chronic Dysentery by Enemata of Nitrate of Silver. (*Lancet*, April 1882, p. 640.)

3. SQUIRE.—The Treatment of Diabetes. (*Practitioner*, May 1882.)

4. MACAULAY.—Ergot in Diabetes Insipidus. (*Lancet*, April 1882, p. 686.)

5. DEWAR.—Ergot in Pertussus. (*Practitioner*, May 1882.)

6. SHORTT.—Liquor Potassæ in Snake-Bites. (*Lancet*, May 1882, p. 725.)

7. STEVENSON.—Eucalyptus in Leprosy. (*Lancet*, May 1882, p. 730.)

8. HUCHARD.—Nitrate of Pilocarpine in Hysterical Hemianæsthesia. (*Jour. de Méd. et de Chir.*)

9. VAN OYE.—The Action of Carbolic Acid on Fever Patients. (*Jour. de Ther.*, 10th Feb. 1882.)

10. BALL.—The Bromides in Epilepsy. (*Jour. de Méd. de Paris*, Jan. 21.)

11. YOUNG.—Agaricus in the Night-Sweats of Phthisis. (*Glasgow Med. Jour.*)

12. DUCROUX.—Polyuria and its Treatment by Pilocarpine. (Paris, 1882.)

13. ANDRIEU.—Pyrogallic Acid in the Treatment of Venereal Ulcers. (*Thèse de Paris*.)

14. EVERETT.—Inhalation of Cold Air in Pneumonia. (*New York Med. Record*.)

15. SCHUSTER.—On Mercuric Soap.

16. CANTANI.—Sulphuretted Hydrogen in Tuberculosis. (*Centralbl. für die Med. Wiss.*, No. 16, 1882.)

17. ROBIN.—Cantharidism. (*Jour. des Sciences Méd. de Lille*, April.)

1. Forster on *Veratrum Viride* in Cardiac Irritability.—Mr. E. Wood Forster, in the *Brit. Med. Jour.*, April 1882, p. 534, relates a case of a youth suffering from extreme cardiac irritability, accompanied with slight hypertrophy, in whom three doses of veratrum viride proved highly beneficial after digitalis had failed to give relief.

2. Mackenzie on the Treatment of Chronic Dysentery by Large Enemata of Nitrate of Silver.—In the *Lancet*, April 1882, p. 640, Dr. Stephen Mackenzie reports four severe cases of chronic dysentery, which were rapidly and effectually cured by one, or at the most two, injections of nitrate of silver, in the proportion of one drachm of the nitrate to three pints of water. [A reference to the *Med. Digest*, sec. 904, 4, will show that twenty years ago this plan was much more frequently employed than it has been of late years. It was found to be equally efficacious in acute and in chronic cases. In the *Lancet*, June 1876, p. 911, a case is reported in which several American medical men introduced a speculum into the rectum under anæsthetics, and freely cauterised the mucous membrane as high as they could reach, and with marked success.—*Rep.*]

3. Squire on the Treatment of Diabetes.—Dr. Wm. Squire, in a very suggestive paper in the *Practitioner*, May 1882, p. 346, makes, among others, the following remarks. Bethesda waters are utterly valueless. The value of codeia is beyond dispute. Moisture is restored to the skin by two or three drops of carbolic acid in an ounce of water, given three or four times a day for short periods. A similar solution, sprayed into the fauces, relieves the dryness of the mouth and throat. This solution of carbolic acid should always be given during an intercurrent abscess or boil, for two days before any incision is made, in diabetic subjects. In one form of albuminuria, co-existing with diabetes, viz., where there is parenchymatous nephritis appearing in the course of typical diabetes, milk must be absolutely forbidden. Grave anxiety, caused by the persistence of both sugar and albumen, has been shortly relieved after the milk has been stopped, and cream exclusively substituted. An agreeable cheese-cake may be prepared in the following way. Grate one ounce of bread with the rind of two lemons, and mix with

half an ounce of glycerine; with this whisk up the whites of three eggs, two ounces of cream, and one of fresh butter, melted by heat; add also the juice of two lemons, and the yolks of three eggs, well beaten; mix all together, and bake, in ramakin cups, for about twenty minutes in a rather quick oven. A little more glycerine, or a little less lemon juice, will modify the flavour and consistence of this confection. It is to be eaten when cold.

4. *Macaulay on Ergot in Diabetes Insipidus*.—Mr. S. Macaulay, in the *Lancet*, April 1882, p. 686, reports another case, showing the great value of ergot in this disease. (*Vide LONDON MEDICAL RECORD* 1880, p. 231, and 1881, p. 12.)

5. *Dewar on Ergot in Pertussis*.—Dr. John Dewar, in the *Practitioner*, May 1882, p. 358, draws attention to the great value of the liquid extract of ergot in whooping cough, in which disease he believes it to be the best and safest of all remedies. [In the *Edinburgh Med. Jour.*, 1863, Dr. Griefenkel reported a case of a lad, six years old, who was cured of whooping cough in eight days. (*Vide Med. Digest*, sec. 715, 4.) During the last week, in the reporter's practice, a child of eighteen months, not progressing well under the belladonna treatment, was vastly relieved after a few 5-minim doses of Battley's liquid extract of ergot.—*Rep.*]

6. *Shortt on Liquor Potassæ in Snake-Bites*.—Dr. John Shortt adds several to the numerous cases he has previously reported, in which liquor potassæ, internally and externally, combined with brandy, has succeeded in effectually curing patients bitten by venomous snakes. (*Vide Lancet*, May 1882, p. 725). [Dr. Shortt communicated to the *Lancet*, May 1870, p. 540, a very valuable paper upon this mode of treatment, as well as to other journals of subsequent dates.—*Rep.*]

7. *Stevenson on Eucalyptus in Leprosy*.—In the *Lancet*, May 1882, p. 730, Mr. Edward Sinclair Stevenson speaks very confidently of the good results he obtained in a case in which he gave liberal doses of the tincture of eucalyptus. R. NEALE, M.D.

8. *Huchard on Nitrate of Pilocarpine in Hysterical Hemianæsthesia*.—Dr. Huchard (*Jour. de Méd. et de Chirurg.*) remarks that hysterical hemianæsthesia is generally a symptom which is very intolerant of any treatment; and if it yield to the employment of metals, of the magnet, or of static electricity, it generally reappears after a short time. In the cases of patients, two of whom had hemianæsthesia, and one total anæsthesia, M. Huchard had recourse to injections of nitrate of pilocarpine. Up to the time of the report, however, the case of total anæsthesia had only become transformed into hemianæsthesia, while in the other two the hemianæsthesia has disappeared. An abridged description of one case is as follows. A girl, seven years of age, nervous and impressionable, subject to convulsive crises nearly every month, presented hemianæsthesia of general and special sensation on the right side, with ovarian hyperæsthesia and slight amyosthenia of the same side. Before injection, it was found by the help of a special thermometer, and contrary to what has hitherto been noted, that the temperature on the anæsthetic side was two-tenths of a degree Cent. (0.36 Fahr.) higher than on the healthy side. After two injections of pilocarpine, made at an interval of two days, the local temperature was carefully taken by the house-surgeon, M. Binet, on eight different occasions in sixty-five minutes. It was found that the local temperature rose gradually under the influence of injections of pilocarpine, with a tendency to be-

come equalised on both sides during the period of increase. The acme was attained about forty minutes after the first injection, performed at the level of the thighs; and the next day at the end of fifteen minutes only, after an injection had been made in the upper part of the body. During the acme the difference of temperature seemed to be greatest in the lower limbs, where it reached nine-tenths of a degree Cent. (1.62 Fahr.) In the upper part of the trunk, the difference remained as it was at the beginning. The quantity of sweat collected was sensibly equal on both sides, and two injections of pilocarpine were sufficient to bring back sensibility on the anæsthetic side; this result lasted until the patient left, nine days after this treatment had been used. In another patient affected with total anæsthesia and with contraction of the left leg, sensation returned on the right side, and lasted up to the time of the report at the end of a fortnight.

9. *Van Oye on the Action of Carbolic Acid on Fever Patients*.—Dr. Van Oye's thesis, published at Paris in 1881, contains the following conclusions on this subject (*Jour. de Thérap.*, 10th February 1882). Carbolic acid is a poison of the nervous system, and possesses in the highest degree the property of lowering the temperature of man and the higher animals. Doses of carbolic acid, without appreciable action on the normal temperature, are sufficient to lower the febrile temperature. This lowering is produced in febrile patients whether suffering from simple inflammation, or from infectious pyrexia. It commences very soon after the absorption of the medicine, and its extent varies, according to the dose, from one to three degrees, and its duration from one to three hours. Its probable cause is the loss of heat, resulting from the cutaneous hyperæmia, and the more or less abundant sweats which coincide with its production. A rigor and all the phenomena of the febrile state supervene, when the antipyretic action of the preceding dose is exhausted. At the same time the temperature rises suddenly to its original level, and even above it. A new dose may interrupt this attack, and even prevent it if the medicine be administered in time. Doses which are sufficient to produce the entire useful antipyretic effect do not exercise any injurious toxic action on a fever patient. Fifty centigrammes administered by the rectum are sufficient in all cases at the outset. As a rule, doses of two grammes may be gradually reached. One gramme given at once, has, in some patients of special susceptibility, been sufficient to produce a lowering of temperature to the extent of 34.5 deg. Cent. (94.1 Fahr.) This exaggerated depression has not in any case been injurious to the patient. Pulmonary congestion is a danger to be feared and avoided in the use of carbolic acid. Dr. Van Oye has pointed out albuminuria, polyuria, and fatty degeneration, as the possible effect of strong doses greatly prolonged. The antipyretic properties of carbolic acid should, the author says, be reserved to overcome high temperature in continued fever, and to prevent the paroxysms in intermittent fever.

10. *Ball on Bromides in the Treatment of Epilepsy*.—A combination of bromides has long been recommended in epilepsy. The experience of Brown-Séquard was to this effect, and his formula is in constant use in the present day. It is as follows: Take iodide of potassium, one drachm; bromide of potassium, one ounce; bromide of ammonium, two-and-a-half drachms; bicarbonate of potash, two scruples;

infusion of calumba, six ounces. Mix. One drachm before each meal, and three drachms at bed-time. In the *Jour. de Méd. de Paris*, January 21, 1882, Professor Ball recommends the use of the alkaline bromides, particularly those of ammonium and sodium, with belladonna and oxide of zinc. He administers these bromides of each 10 parts in 300 of water, commencing with teaspoonful-doses four times a day, and increasing up to eight or ten doses daily, if the treatment be not followed by improvement within a few days. The belladonna and the oxide of zinc are given in pill form, 15 grains of each being made up into forty pills, and of these, two are taken daily, one in the morning and one in the evening; four pills can be given daily in rebellious cases without causing any inconvenience. For many reasons he prefers this double salt to the other bromides; it does not produce the headache or torpor generally following the prolonged use of the bromide of potassium, and even when a cure is not produced the double bromide diminishes the frequency and intensity of the attacks, even in cases where the bromide of potassium has failed. The eruption following the use of the potassium salt is rarely seen when the double bromides are used.

11. *Young on Agaricus in the Night-Sweats of Phthisis.*—Mr. J. M. Young (*Glasgow Med. Jour.*) classifies the results of his observations as follows. 1. Night-sweating becomes proportionately lessened according to the amount of the drug administered; and, if sufficient doses be given, becomes effectually checked or prevented, according to the time of administration. This was observed to be the absolute rule in all moderate cases of phthisical night-sweating where it was tried; and in one case, where the sweating was colliquative, agaricus brought the sweating within moderate limits. In other cases of sweating not dependent on phthisis, the drug was found to work well; indeed, its most notable effect was observed in the case of a patient who had sweating of the right side of his body and right leg persistently at night for eight months, and in which a dose of ten grains stopped the symptoms for a night almost at once. In the quickness of its action, agaricus resembles atropia. Like atropia, too, the effect is not permanent. 2. The effect of the drug against sweating is not more marked than its effect in promoting sound sleep, and relieving troublesome cough, especially of phthisis. This is the most notable fact to the patients themselves, a gradually increasing feeling of drowsiness following its administration in most cases. The antihydrotic and soporific effects of the drug are probably distinct from one another, and not to be related as cause to effect, since, in some of the cases observed, sweating was always complained of as occurring during sleep, the body being covered with perspiration on awakening. Cessation of cough may, however, be the result of soundness of sleep. 3. Strict investigation seemed to show that the drug has considerable influence in reducing the temperature, in cases of phthisis at least, where the fever is unstable, as much as two degrees of a fall having been observed with half-an-hour after administration of 1-12th of a grain of agaricine. Such a marked result was not always obtained by repetition of the experiment in different cases; but the fall observed in this way averaged 1.4 deg.; and had its expression in a relieved feeling on the part of the patient. Along with the effect on temperature, it may be noted that the rate of the pulse becomes usually reduced to a corresponding degree; but this effect has not been invariably noticed.

12. *Ducroux on Polyuria and its Treatment by Pilocarpine.*—Dr. Ducroux, in an essay on this subject (Paris, 1882) points out that polyuria may constitute an essential affection, with more or less abundant elimination of urea, oxalates, and phosphates, or may be only the symptom of another disease, interstitial nephritis, diabetes mellitus, or cerebral hæmorrhage. Essential polyuria is principally met with in adolescence and childhood; in old age, symptomatic polyuria is more often met with. It is especially in children and adults that the former shows itself, because at that age the nervous condition predominates, which, according to Lecorché, is one of the predisposing causes, in the same way as are scrofula, alcoholism, syphilis, arthritis, hysteria, and heredity. Other causes which have been pointed out are chills, mental disturbances, grief and fatigue. In chronic polyuria, the quantity of urine may rise to 35 to 50 pints in a day. The progress of this affection is variable. It may be acute and cease spontaneously, or it may pass into the chronic state and be of life-long duration. Examination of the urine is the only means of ascertaining whether the case be one of simple azoturia, phosphaturic, or oxaluric polyuria, or if the patient be suffering from diabetes mellitus or from nephritis. The diagnosis from interstitial nephritis sometimes presents great difficulties. Since, in polyuria, the functions of the skin are generally very badly performed in consequence of the disturbance of the balance between the sudorific and renal secretions, it was natural to think that jaborandi, and especially its alkaloid pilocarpine, as a consequence of their sudorific action, would diminish the amount of urine in simple polyuria, and consequently lower the amount of urea eliminated in azoturia polyuria. M. Albert Robin has, in fact, already pointed out that urea always decreases in the urine under the use of jaborandi or its alkaloid, and that this decrease oscillates between about $7\frac{1}{2}$ and 150 grains; after the action of the drug, the urea regains its normal standard. It now remains to analyse the sweat, and to find if the urea, the salts, and the extractive matters, which, under the influence of the drug, are eliminated in a smaller quantity by the urine, are not found in more than normal quantity in the perspiration. The sweat obtained by administration of pilocarpine contains, according to M. Albert Robin, from 50 centigrammes to 2.9 grammes of urea per litre, instead of 40 centigrammes, stated by Favre to be the amount for normal sweat. It likewise contains an excess of chlorides. M. Huchard, at the commencement of last year, first used pilocarpine in polyuria, and it was in his wards at the Tenon Hospital that M. Ducroux collected the seven cases published in his thesis. M. Huchard employed nitrate of pilocarpine in hypodermic injections of from one to two centigrammes (0.15 to 0.3 grain). A daily injection was given during from three to five consecutive days; then they were suspended during the same interval of time, and again continued in the same fashion. In certain diseases the medication was of necessity suspended for a longer time, in consequence of the fatigue produced. At other times these intervals, though necessary, were very irregular. The appetite was generally not so good during the whole course of the treatment; but no patients lost flesh. The results of this new medication, summarised from the author's seven instances, are as follows. Pilocarpine brought on complete cure in two cases of azoturia polyuria, one essential, the other symptomatic of nephritis. In the latter case, it even led to the disappearance of a

very marked amblyopia. In two cases of simple polyuria; it brought on a decrease of the quantity of urine, and a decided improvement in the general symptoms. It was powerless in a case of saturnine polyuria, in one of chronic essential polyuria of long standing, and in one of scrofulous polyuria with cachexia, in which the patient could not tolerate it. These cases are not as yet sufficiently numerous to exactly indicate those forms of polyuria in which it is advisable to use pilocarpine; but it is now well established that this troublesome affection is often influenced in the happiest manner, or even cured, by this treatment. M. Ducroux records that M. Huchard has tried pilocarpine in doses of five milligrammes (0.75 grain), at night for the nocturnal sweats of phthisical patients, and has often seen them decrease, or even completely disappear, after having resisted atropine. Relapses occurred, but they also happen with other forms of treatment.

13. *Andrieu on Pyrogallie Acid in the Treatment of Venereal Ulcers.*—Dr. Andrieu (*Thèse de Paris*, 1881) says that pyrogallie acid has been introduced into therapeutic use by Dr. Jarisch of Vienna. Since then M. Vidal at Saint-Louis, and M. Terrillon at the Lourcine Hospital, have applied it successfully to the treatment of soft chancre. The formula used at the Lourcine is as follows: Starch, 40 grammes; vaseline, 120 grammes; pyrogallie acid, 40 grammes. This ointment should be used fresh, and kept in a stoppered bottle. To remedy the inconveniences of dressing venereal ulcers with fatty bodies, M. Terrillon has substituted for the ointment a powder composed as follows: Pyrogallie acid, 80 grammes; starch, 80 grammes. This powder is blown on the part by means of a small bellows. Nevertheless, a certain number of cases reported by Dr. Andrieu in his thesis tend to show the superiority of the ointment over the powder. If one application be made daily, the duration of the treatment is notably abridged, in comparison with the methods generally employed. It is sometimes necessary, when the ulcer is very extensive, to make two applications; but the latter is the exception. After the second application, the chancres will have lost all their virulence.

14. *Everett on Inhalation of Cold Air in Pneumonia.*—Dr. J. T. Everett of Sandusky, Ohio (*New York Med. Rec.*), states that the continuous inhalation of cold air, ranging from 10 deg. to 15 deg. Fahr., while the patient is kept in a room with a temperature of from 80 deg. to 85 deg. Fahr., will, in the early stage of pneumonia, act as an abortive, and bring the disease to a speedy termination. His explanation is that the cold air, coming into direct contact with the tissues of the pulmonary parenchyma, extracts heat from the blood; and by carefully noting the external temperature and that of the patient, this abstraction of heat can be regulated with the utmost nicety and precision—can be commenced or stopped instantly, without prostrating the nervous system by sedatives or narcotics, and without the loss of blood. This cold air, in thus coming into contact with the lung-tissue, causes contraction of the vessels, thus lessening the amount of blood admitted to the lung-tissue, and by its constricting influence tends to drive out that which has become partially deposited by the stasis, while, by increasing the oxygenation of that already admitted, it hastens resolution. The increased heat of the air surrounding the patient favours copious perspiration, thus by the evaporation process favouring the additional abstraction of heat. In winter, when the out-door atmosphere is cold, he causes the patient to breathe through an India-

rubber tube, one end of which is inserted through a hole in the window sash, while the other end, fitted with a proper face-piece, is given to the patient. In treating a few cases that might occur in the summer, the air should be drawn through a refrigerator. The history of eight cases is given, all of which recovered rapidly.

15. *Schuster on Mercuric Soap.*—Dr. Schuster, of Aix-la-Chapelle, records some interesting investigations, made under his direction, into the therapeutic value of Mercuric soap, as compared with the older and less elegant forms of inunction of mercurials hitherto employed. Experiments made by Vajda and Paschkis in Vienna having tended to show that mercury could be detected in the urine (by Ludwig's method), in a large majority of cases treated by simple inunction, Dr. Schuster determined to examine the urine for mercury in cases treated, first with the soap and afterwards with the ointment, for purposes of comparison. The chemical processes were undertaken by Dr. Schridde, employing the Fürbringer-Ludwig method, with the additions described by himself in *Berlin Klin. Woch.*, No. 34, 1881. Four cases of well-marked syphilis were thus treated. In only two cases was mercury detected in the urine, as well after the use of the soap as after that of the ointment. All the cases showed improvement, but in none of them was the improvement more marked in the one case than the other. The therapeutic evidence, then, would tend to show that the preparations are of equal value, whilst the chemical evidence is negative. Further experiments, recorded elsewhere, prove that the appearance of mercury in the urine is a less common occurrence than has been supposed. The mercuric soap, which is now sold in twenty-gramme cakes, each containing four grammes of pure quicksilver, forms a good lather with ordinary water, and, being allowed to dry on the skin, leaves behind a thin grey layer of mercury, which, again, can be removed in a moment by washing, if required. It may thus be applied for longer or shorter time to various surfaces of the body; and although, like the other preparations, it is liable to produce a diffuse erythema if long continued in one spot, it will recommend itself for use in travelling, and also possibly as a means of administering mercury in cases where unreasoning prejudice forbids its use in any other way.

E. CLIFFORD BEALE.

16. *Cantani on Sulphuretted Hydrogen in Tuberculosis.*—In the *Centralbl. für die Medicin. Wissen.*, No. 16, 1882, Professor Arnaldo Cantani of Naples communicates the results of some experiments which he has undertaken in consequence of the publication of Froschauer's results obtained on animals, the subjects of septicæmia, by the use of sulphuretted hydrogen. Both himself and his colleagues, Drs. Lepido-Chioti and Paolucci, had observed the good effects following the use of the waters of the solfatara of Pozzuoli, which, in addition to sulphuretted hydrogen, contains some sulphuric acid; and they were then induced to try the fluid in some amount of concentration, as well as subjecting patients to the action of the vapour in peculiarly constructed chambers. The results arrived at were these. 1. The patients, though at first unwilling, subsequently became quite tolerant of confinement in a room impregnated with sulphuretted hydrogen—no bad effects following. 2. That the patients hitherto treated in this manner usually became quite free from fever in a few days. 3. The local process did not make any progress

during the treatment, and the expectoration was lessened. The experiments are being continued to insure against accident. F. WILLIAM ELSNER.

17. *Robin on Cantharidism.*—A young child, who had an issue which was dressed with ointment of cantharides, was seized very suddenly with very acute pain whilst urinating (*Jour. des Sciences Méd. de Lille*, April 1882). These pains recurred in irregular crises of more or less duration, frequently with extreme intensity. Five attacks of the same kind occurred during three months. Finally, he was taken one day with an attack, which lasted seventeen hours, and was characterised by constipation, nausea, nightmare, and excessively violent pains. Several medical practitioners, called in consultation with M. Guéneau de Mussy, differed with regard to the diagnosis. Neuralgia of the bladder, amyloid degeneration of the kidneys, and compression of the medullary substance of the organ, were each suggested. M. Albert Robin examined the urine. On the day of this attack there were four discharges of urine, which presented a very notable difference in regard to their composition. The examination especially revealed four leading points—diminution of the chlorides, increase of the phosphates, a considerable quantity of lime and magnesia, and, finally, temporary albuminuria. This examination, therefore, did not reveal anything special, and the diagnosis still remained uncertain, when it was remembered that cantharides ointment had been used in dressing the child's issue. The dressing was immediately dispensed with, and the symptoms disappeared. The case was, therefore, one of a special variety of cantharidism, differing from ordinary cantharidism by several characteristics. Whilst in the latter there is a considerable diminution of urine, in the case in question this diminution was insignificant. The quantity of urea had also increased; but the most remarkable symptoms of this kind of cantharidism was the transient albuminuria, manifesting itself especially at the commencement of the attack, and disappearing with it.

MEDICINE.

1. BLAISE.—On Myxœdema. (*Archives de Neurol.*)
2. SCHMITZ.—Experience derived from Six Hundred Cases of Diabetes. (*Deutsche Med. Woch.*, Nos. 48, 49, 51, 1881.)
3. HELMKAMPFF.—On Vaccination. (*Deutsche Med. Woch.*, 1882, No. 11.)
4. HERTZ.—On the Treatment of Empyema in Phthisical Individuals by Continuous Aspiration. (*Deutsche Med. Woch.*, 1882, No. 11.)
5. ROSENBACH.—On Neuroses Associated with the Vagus Nerve. (*Deutsche Med. Woch.*, 1882, No. 12.)
6. BOURCY.—Rheumatismal Nodules. (*Jour. de Méd. Paris*, March 11.)
7. RAYMOND.—On Delirium Occurring in the Course of Chronic Nephritis. (*Archiv. Gén. de Méd.*, March 1882.)
8. LITHGOW.—Recovery from Cirrhosis of Liver after Paracentesis Abdominis Twelve Times. (*Lancet*, May 1882, p. 730.)

1. *Blaise on Myxœdema.*—Dr. Blaise of Montpellier gives an interesting review of this disease in the *Archives de Neurologie*, Nos. 7 and 8. It is unnecessary to recapitulate the symptoms of *cachexie pachydermique*, as given by M. Blaise; but it will not be

without profit to mention briefly a case of this disease, in which there were marked cerebral symptoms of a transitory nature. The patient was a woman, aged 34, of so-called scrofulous habit. The catamenia, which first appeared when she was eleven years old, were regular, but very profuse. There was a suspicion, almost a certainty, of venereal excesses, but there was no trace of syphilis. She had never had children. Ever since menstruation, the patient presented precocious development, so much so that at the age of thirteen she had the aspect of a woman of eighteen. The swollen appearance of the body was not manifest until her twenty-seventh or twenty-eighth year, although M. Blaise thinks that the affection began six years previously. At this time the hair on the scalp, eyelids, and other parts began to come away in large quantities, gastralgia with vomiting troubled her, and dysmenorrhœa made its appearance. The catamenia about the same time stopped for four months. Under generous diet, iron and quinine, her general condition was much relieved, although the unusual size of the body still persisted. At the age of twenty-seven her dimensions became more exaggerated, the skin became thickened, and various cutaneous sensory disorders supervened. There were frequent headaches and pains, especially referrible to the cheek-bones. At the same time the speech was slow and thick, the disposition restless, and the ideas retarded. Various delusions were noticed. She complained of bad tastes and smells, of obscene remarks addressed to her by people round about, of insults, etc. Although at first she knew that such ideas were imaginary, she soon became convinced that they were real. Shortly after this mental state became marked, the face took on the characteristic aspect, the skin and mucous membranes became thickened, and the speech more peculiar. But, curiously enough, the psychical condition and the swelling of the integuments rapidly diminished, and the obstinate constipation which previously existed gave place to attacks of diarrhœa. At the present time there is no sensorial disorder, and the mental state is excellent. The speech still preserves its former character, though to a very slight degree, and there still remains some slight bodily and mental inertia. The special facies, although less marked, has not disappeared, and the expression is mask-like. The teeth are in excellent preservation. There is still, however, general solid œdema of the body, and the skin is very dry. The urine, with the exception of a trace of mucus, is normal; but the quantity of urea contained in it is diminished (14 grammes only being excreted in one day). The temperature is not lowered. As regards treatment, iodide of potassium was tried, but ineffectually. Iron and quinine were apparently efficacious in bringing about the improvement in the patient's condition. M. Blaise thinks that this case goes to support Dr. Ord's theory that the nervous disorders are related to the state of the integument. The cerebral and bodily condition underwent simultaneous improvement.

W. B. HADDEN, M.D.

2. *Schmitz on Diabetes.*—Dr. Schmitz of Neuenahr (*Deutsche Med. Woch.*, 1881, Nos. 48, 49, 51; *Wiener Med. Woch.*, 1882, No. 11) has tabulated the results of his experience in 600 cases of diabetes, and has found that 407 of the patients were males and 193 females. The largest number, 196, occurred in the decade between 50 and 60; the youngest patient was a girl aged 4, the eldest, a man aged 78. The occurrence

of diabetes is undoubtedly influenced by an hereditary predisposition, which is found in families in which there are, or have been, psychoses of any kind. Tubercular families are also predisposed to diabetes. In 183 cases, there were nervous disturbances as direct exciting causes; in 153, the cause was the too liberal use of sugar and food containing it; in 45 cases, gout and general debility, after severe acute or chronic affections. The specific gravity of the urine varied between 1025-1035. Occasionally, from 1 to 1.5 per cent. of sugar was found to be present in urine of specific gravity 1015-1013. The prognosis as regards life, even to complete recovery, is by far not so hopeless as formerly considered. Dr. Schmitz enumerates a series of cases in which the patients remained for years without a trace of sugar in their urine, whilst living on a regulated diet, which was not even antidiabetic, in some cases only cane-sugar being strictly avoided. Some cases of long-standing diabetes may even be recovered by a correct treatment; and the author relates cases which were completely cured, and did not relapse, even after years of return to highly saccharine food. The prognosis rests upon the following factors; 1. Whether the illness were diagnosed early and were correctly treated, or whether it had already existed some time; 2. The exact carrying out of the directions by the patient; 3. The etiological character of the affection; 4. The age of the patient; 5. The amount of saccharine matter which can be borne with impunity. In recent cases the prognosis is favourable; diabetes, as a result of diseases of the central nervous system, or of severe chronic diseases, has a most unfavourable one. Gouty diabetes, and that following mental depression and the liberal use of saccharine food is the most favourable for treatment. Up to the seventh year, the prognosis is not bad, but becomes so from the tenth to the thirtieth, and is less favourable as age advances. Those cases are decidedly unfavourable in which the exclusive use of a fish and meat diet has not succeeded in causing the disappearance of the sugar from the urine; but those in which the diet, consisting of eggs, the leafy parts of vegetables, and a little mild cheese, keeps the sugar out, only to reappear on the administration of cane-sugar, starch, or fruit, or roots, enjoy a most favourable prognosis, and are least liable to relapses. F. W. ELSNER.

3. *Helmkampff on Vaccination.*—After remarking (*Deutsche Med. Woch.*, 1882, No. 11) on the antivaccination crusade which is carried on in Dresden, as well as in England, Dr. Helmkampff mentions certain striking instances of immunity on the part of bodies of German troops exposed in the most intimate manner possible to small-pox infection during the campaign of 1870. He then goes on to describe what he considers the best, because the 'quickest, safest, and also most pleasant' method of operating. It is by means of Güntze's vaccination pen. This consists of a blunt silver drawing pen, with a small, bent, only moderately sharp blade between the two points of the pen. The little blade is moved by means of a screw, and the pen having been filled with lymph, it is screwed into position. The instrument is then drawn gently, at an angle of 45 deg., twice across the insertion of the deltoid of both arms, the lines being two inches long, and about one inch apart. In this way, he gets generally as many as sixteen pustules. The children, he considers, are less annoyed by this method, while the method is certain.

4. *Hertz on the Treatment of Empyema in*

Phthisical Individuals by Continuous Aspiration.—

After noting and confirming the bad results of incision in cases of phthisical empyema, as given by Fräntzel, Senator, and others, Dr. Hertz states (*Deutsche Med. Woch.*, 1882, No. 11) that the contra-indication of this operation lies mainly in the fact that a pneumothorax is produced. The phthisical lung has but little power of recovery from the collapse, and, consequently, the tubercular affection makes rapid advance. Dr. Hertz, however, considers that in many cases removal of the exudation is most beneficial, and recommends for this purpose Dr. Bülow's method of thoracentesis, followed by continuous aspiration. The continuous aspiration is accomplished by passing through the trocar used for the thoracentesis a Nélaton's catheter, having attached to the end of it a long tube dipping under a disinfecting fluid. The catheter is kept in the pleura by means of a cotton-wool compress, fastened air-tight with collodion. Dr. Hertz brought before the Hamburg Medical Society two cases in which this treatment had been carried out with good results, that is, the purulent exudation was completely removed, and there was, within a month or six weeks after the operations, no advance, but, if anything, in one case, a regression of the general phthisical symptoms. The first patient was a girl, aged 16 years, the subject of hereditary phthisis; the second was a woman, aged 32, with phthisical affection of the right apex.

5. *Rosenbach on Neuroses associated with the Vagus Nerve.*—After noting the frequency of cardiac irregularity from indigestion, Dr. Rosenbach records (*Deutsche Med. Woch.*, 1882, No. 12) a case of cardiac irregularity caused by the horizontal posture, and a case of temporary central paralysis of the vagus nerve. The patient in the first case was a prematurely old man, aged 55, who complained that, so soon as he lay down in bed, he had a feeling of præcordial anxiety, and usually awoke in great distress, with the hands cold and stiff. With the exception of slight anæmia, some signs of arterial sclerosis, and a slight emphysema, there was nothing abnormal in his condition. The digestive functions were normal. His pulse in the erect posture was 72, regular, and moderately full; but, on his assuming the recumbent posture, with the head low, it fell to 60 or 64, and became irregular and intermittent, all which characters disappeared almost immediately on his assuming the erect posture again. Dr. Rosenbach, considering that he had excluded all other possible causes, attributes this phenomenon to the change in the outflow of blood from the cranial cavity. This outflow being much less free in the horizontal than in the erect posture, as shown by the more rapid current in the veins at the root of the neck when the erect posture is assumed, he considers that in a patient with arterial sclerosis the tonus of the vagus and of the vaso-motor nerves produced by the venous blood will cause retardation of the heart's beat, with increased arterial tension. The patient in the second case was a man, aged 31, affected with phthisis. While in hospital, he was attacked with vertigo and headache, his pupils being extremely narrow. Two days later he became insensible, breathing once, or at most, twice a minute, while at the same time the heart was extremely frequent and tolerably full. Under artificial respiration, carried on for an hour and a half, the patient recovered. Each time the artificial respiration was stopped, the patient again ceased to breathe, and became cyanotic. That the vagus could still con-

duct impulses, was shown by the fact that electric stimulation with a strong current reduced the heart's beats from 156 to 100 or less, per minute. After the above period, Cheyne-Stokes's respiration set in, and for two hours longer the patient required to be roused occasionally. A month later, the patient died of tubercular meningitis. Dr. Rosenbach puts down the symptoms in this case to a central paralysis of the vagus, owing to a disturbance of nutrition in the respiratory centre of the medulla oblongata.

JAMES ANDERSON, M.D.

6. *Bourcy on Rheumatismal Nodes.*—In April 1881, MM. Trosier and Bourcy published in the *Revue de Méd.* a paper entitled *Ephemeral Nodes in Rheumatism*, in which they cited many cases. A case of this complication is described by M. Bourcy in the *Jour. de Méd. de Paris*, 11th March. H., aged 19, had previously good health and no trace of rheumatism. He had whooping cough when he was seven years old, and never had gonorrhœa nor syphilis. In January 1881, he was attacked by scarlatina, when he was in full desquamation, and without any appreciable cause he was attacked by acute articular rheumatism, limited in the first place to the tibio-tarsal joints, but in less than three days extending to all the joints. There was moderate pain, with swelling, which soon yielded to the administration of a drachm and a half of salicylate of soda. Five days after the commencement of the symptoms of rheumatism, an intense endopericarditis supervened, which yielded to cupping and repeated blistering. Convalescence was tedious, but cure was completed towards the end of May. On the 13th September, the patient re-entered the hospital with a fresh attack of rheumatism. All the large joints were swollen and painful; there were intense fever, dyspnœa, a rubbing sound at the level of the breast, and an intense *souffle* with the first sound of the heart. Patches of erythema were present on the arms and thighs. He was treated with a drachm of salicylate of soda. On the 1st October, when quite convalescent, he detected some small nodules on the scalp whilst combing his hair. They were about the size of a lentil, and painless. They were movable on the bone and under the skin. In about eight days, some appeared on the eyelid and right elbow-joint; in the course of the tendons of the long and short palmar muscles, on which they were grouped like necklaces of beads; along the articular ligaments of the phalanges, where they simulated the gouty deposits, and where they acquired their maximum of development (about the size of a hazel-nut); also on the tendon of the right peroneus longus, on the spinous processes of most of the vertebræ, etc. Some of them, including those on the forehead, disappeared at the end of a few days; those on the scalp and on the tendons of the head gradually decreased; but up to the 15th December they had not completely disappeared. The last of them, those on the knee, and even on the peroneus and the spine, were as protuberant as ever. In other respects, the patient was completely cured of his attack of rheumatism.

7. *Raymond on Delirium during Chronic Nephritis.*—Dr. Raymond (*Arch. Gén. de Méd.*, March) has had the opportunity of observing during the evolution of chronic nephritis certain cerebral phenomena which do not usually attend cerebral uræmia, viz., symptoms of mania, of chronic delirium, with hallucinations of sight and hearing. The delirious form is very rare as an isolated manifestation of uræmia. Sometimes the delirium as-

sumes the comatose type, and sometimes the convulsive type, but, as a general rule, it is moderate, quiet, mild, and transitory, and occurs usually towards the end. It may also, as M. Lasègue has shown, concentrate in itself the whole of the symptoms affecting the nervous system. It then shows the characteristics of acute mania. But, according to the same writer, the delirium must not be hastily attributed to uræmic poisoning in all cases in which it appears, for it may be caused by alcoholism, acute intercurrent affections, etc. Hagen of Erlangen has published four cases of this nature. In the *Four. of Mental Science*, Dr. Samuel Wilks in 1874 related three cases of uræmic mania. Schultz, in 1876 (*Berl. Klin. Woch.*), has published one case, and Husland an analogous case in 1880. Finally, M. Lecorché relates another in his *Etudes Médicales faites à la Maison de Santé*. Dr. Raymond relates four cases in which the delirium could not, he says, be confounded with a simple mental excitement without perversion properly so called. But in that kind it is much more difficult to say if this delirium be produced in an accidental manner by the presence of any disease whatsoever, or of any complication, or whether it rather belongs to mental insanity. Examination of these four cases leads him by a process of exclusion to connect the intellectual disturbance with chronic renal disease, and more certainly still with uræmic poisoning; and M. Raymond points out, in support of this opinion, the well-verified alternation of delirium with other symptoms of uræmia.

8. *Lithgow on a Case of Recovery from Cirrhosis of the Liver in which Paracentesis Abdominis was performed Twelve Times.*—This case, reported in the *Lancet*, May 1882, p. 730, by Dr. R. A. D. Lithgow, occurred in an intemperate man, who was induced to leave off his stimulants, and who eventually returned to his duties almost quite well. After three years and a half he relapsed into his intemperate habits, and the disease became again developed.

RICHARD NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. SCHMIDT.—Laparotomy in Purulent Peritonitis. (*Wratsch*, Nos. 51, 52, 1881.)

2. BERNHARDT.—Two Cases of Local Asphyxia of the Extremities. (*Arch. für Psych.*, Band xii.)

3. FIEBER.—Nerve-Stretching in Tabes Dorsalis. (*Allgem. Wien. Med. Zeitung*, No. 50, 1881.)

4. SCHÜLLER.—Transplantation of Undescended Testicle into the Scrotum. (*Centralbl. für Chir.*, No. 52, 1881.)

5. HEGAR and KASPRZIK.—Extirpation of Organs and Tumours of the Abdomen by the Elastic Ligature. (*Berlin. Klin. Woch.*, No. 12, 1882.)

6. WHIPHAM.—Complete Dislocation of the Sixth from the Seventh Cervical Vertebra, without Fracture. (*Lancet*, April 1882, p. 523.)

7. BENHAM.—Treatment of Hæmorrhoids by Brushing. (*Lancet*, April 1882, p. 602.)

8. BARWELL.—Boro-Glyceride in Operative Surgery. (*Lancet*, May 1882, p. 774.)

9. MARSHALL.—On Colectomy. (*Lancet*, May 1882, pp. 721, 771.)

10. RUBIO.—The Treatment of Anthrax by Subcutaneous Injections of Carbolic Acid. (*El Siglo Médico*, March 5, 1882.)

11. OBALINSKI.—On Ligature of the Common Carotid Artery or Obstinate Facial Neuralgia. (*Przeg. Lekarski*, No. 45, 1881.)

12. ZINOVIEFF, T. B.—Tracheotomy as a Remedy in Affections of the Larynx. (*Mediz. Obozr.*, Jan., pp. 74-80.)
13. BUCHANAN.—Nerve-Stretching in Locomotor Ataxy. (*Glasgow Med. Jour.*, April 1882.)
14. MORRIS.—Anæsthetics in Bright's Disease. (*Amer. Ophthal. Soc. Trans.*, 1881.)
15. SAMIER.—Treatment of Warts on the Foot and Hand. (*Bull. Génér. de Théraf.*, March 31.)
16. WOLFF.—Wound of the Liver: Recovery. (*Atlanta Med. Reg.*, March 1882.)
17. HAYES.—Excision of the Knee. (*Dublin Jour. of Med. Science*, Feb. 1882.)
18. POINSOT.—The Treatment by Operation of Fracture of the Patella. (*Rev. de Chir.*, No. 1, 1882.)
19. ASSAKY.—The Treatment of Chronic Abscesses by Injections of Alcohol. (*Gaz. Méd. de Paris*, Nos. 6 and 7, 1882.)
20. KOCHER.—On Iodoform. (*Centralbl. für Chirurg.*, Nos. 14 and 15, 1882.)

1. *Schmidt on Laparotomy in Purulent Peritonitis.*—The patient, a young man, aged 21, operated on successfully by Dr. Schmidt for purulent peritonitis was shown last year in the Medical Society of the Moscow Military Hospital (*Wratsch.*, Nos. 51, 52). Eight months before, he had been admitted into the hospital for recurrent fever. In the hospital he had three attacks, the last being followed by inflammatory fever, the cause of which was not clear. Six months thereafter the patient came into Dr. Schmidt's hands in a very reduced condition, and with a well-marked exsudative peritonitis. He decided to open the abdominal cavity, and, under antiseptic precautions, with the patient under chloroform, he made an incision from the umbilicus to the symphysis. On division of the thickened peritoneum, a large quantity of healthy pus gushed out. As there was no sign of decomposition, the cavity was emptied as completely as possible without washing it out with any antiseptic. Two finger-thick drainage tubes were inserted, the wound sewn up, and a strict Listerian dressing applied. The dressing was at first changed daily, afterwards every five to ten days. The wound healed without a bad symptom, and, in two months from the operation, the patient was recovered. Dr. Schmidt believes that the cause of purulent peritonitis is the escape of low organisms from the intestine into the abdominal cavity. Such may be the case, but certainly in this instance the explanation by a thrombosis, brought about by the recurrent fever, seems to lie nearer to hand. But however that may be, the case is an interesting and encouraging one, indicating that surgical treatment is justifiable in purulent peritonitis, as it is in empyema.

2. *Bernhardt on Two Cases of Local Asphyxia of the Extremities.*—The first case, a woman, aged 25 (*Arch. für Psych.*, Band xii), had suffered for two years with deadness of the hands and feet, the fingers becoming a dark, livid red on going into the open air. The skin was delicate, not sclerotic, with here and there superficial excoriations; paræsthesia in the hands, and stiffening of the deeper muscles on exposure to cold. The other case, a man, aged 27, was even more marked, but the symptoms were confined to the right arm, on which he had fallen two weeks before the symptoms commenced. The right hand was cyanotic and icy-cold, the cold being objectively perceptible as far as the elbow. The flexor muscles of the forearm were very sensitive to pressure, and reacted slowly to the induction current. The radial artery was hard, and showed no pulse. These cases, the author believes with Raynaud, depend on increased irritability of the vaso-motor

centre in the medulla oblongata, kept up by peripheral stimuli. The use of the constant current applied to the cervical region of the cord, and to the nerves of the arm, produced temporary improvement in the woman, permanent in the man.

3. *Fieber on Nerve-Stretching in Tabes Dorsalis.*—Several cases have lately been recorded which show that stretching of the sciatic nerve, in cases of tabes, must be done with some caution. It seems unlikely, moreover, that the full benefit of the stretching can in so chronic a complaint be obtained by one stretching of the nerve. As, however, it would be impossible to cut down repeatedly on the nerve in order to stretch it, Dr. Fieber recommends (*Allg. Wien. Med. Zeitung*, 1881, No. 50) a proceeding which Vogt years ago recommended for sciatica. With the ankle superflexed, the knee superextended, the lower limb is superflexed at the hip-joint. Dr. Fieber has convinced himself on the dead body that an extension of the nerve can in this way be obtained greater than is considered necessary for processes of cure, and also that the traction extends by this method as far as the spinal cord. Even by one such extension he has obtained remarkable results. In the case of a young man with fully developed tabes, accompanied by optic atrophy, a single bloodless stretching of the sciatic nerve improved the patient so much, that he has sought a situation as assistant to a dancing master. J. ANDERSON, M.D.

4. *Schüller on Transplantation of Undescended Testicle into the Scrotum.*—Schüller (*Centralbl. für Chir.*, No. 52, 1881) adopts the following mode of operating. An incision, similar to one for hernia, is made from the inguinal ring to the bottom of the scrotum, the canal is then opened, the testicle hooked out with the forefinger and fixed at the end of the scrotum by catgut ligatures, which pass through the external coverings of the testis and the scrotal walls. The tunica vaginalis, which is usually open, is then closed, as are also the inguinal canal and the skin, with the exception of a hole for a drainage-tube. The reasons for this operation are that the testicle, in its undescended state, is liable to strangulation in the inguinal canal, and so to cause pain and inflammatory affections; that herniæ usually complicate the defect, and are thereby made more perilous; and the increased liability to malignant growths (Cohnheim) which the partly undeveloped testicle undergoes in its abnormal situation.

5. *Hegar and Kasprzik on Extirpation of Organs and Tumours of the Abdomen by Means of the Elastic Ligature.*—An important communication on a new method of operating has been just made by the gynecological clinic of Professor Hegar in Freiburg. It would seem that a means has been found by which total extirpation of organs of the abdomen, e.g., the spleen, kidneys, perhaps even of the liver, can be undertaken without very much danger. Hegar was led to use the elastic ligature in the treatment of intraperitoneal fibroid pedicles by the very favourable results he previously achieved in thus treating extraperitoneal fibroids, the danger of hæmorrhage from the pedicle being by this means entirely excluded. Kasprzik, his assistant, in a communication to the *Berl. Klin. Woch.*, No. 12, 1882, has published the results of experiments upon animals, which consisted in placing pieces of elastic tubing, previously disinfected, in the peritoneal cavity of a rabbit, and killing the animal five weeks later, when it was found that the elastic had become fastened to coils of small intestine by fibrous tissue, but not a trace of suppuration was visible. Repeti-

tion of this experiment on other animals gave the same result; therefore, it was held that the elastic ligature was very well borne by the abdominal cavity as a foreign body. A second series of experiments consisted in the tying of pieces of omentum, uterus, spleen, liver, and kidneys, partly with elastic tubing, partly with solid India-rubber ligatures, the stumps being either cut off or burnt with the thermic cautery. The results were most satisfactory in the case of the omentum and uterus, especially with the thin India-rubber ligature, which did not cut its way through the tougher tissues as it did in the case of the spleen, where much better results were obtained by the tubing. In a dog, half the spleen was extirpated, and an elastic tube put on the pedicle, which was then cauterised. Five weeks afterwards, on opening the abdomen, a coil of small intestine was found closely adherent around the stump. On removing this, the ligature was found lying in a little cavity, above adhesions to the stomach. Another dog was at the time of the report still running about with one half of his spleen tied with the tubing, the other with the solid ligature, and was to be killed later on, in order to observe the condition after a longer period of incarceration. The liver and kidneys have not been successfully treated as yet; but Hegar is of opinion that more caution in the degree of tying and in the selection of proper tubing will later lead to success. From these experiments, it is evident that uterine pedicles can be treated without danger by the elastic ligature, which has here to deal with a firm tissue, which can be securely tied without leading to cutting through of the constricted portion, even the ligaments being capable of being treated in this manner. Kaltenbach, at the advice of Hegar, sank the pedicle of a fibroid, secured with an elastic ligature, into the peritoneal cavity after all the most carefully applied sutures had failed to control the hæmorrhage; and the patient, twelve days after operation, was progressing favourably, the temperature in the vagina being 38.4 Cent. (101.1 Fahr.) Hegar uses a particular instrument for the purpose of easily controlling the amount of constriction, which is a forceps with smooth blades and rounded edges, having a spring catch to fix its jaws. For temporary ligature, this fixation would be sufficient; for permanent, it is necessary to fasten the two ends behind the forceps with a wire or silk thread, then to remove it and cut the ends short, the rubber piling itself in front of the constricting wire, and thus precluding the possibility of slipping.

F. WILLIAM ELSNER.

6. *Whipham on Complete Dislocation of the Sixth from the Seventh Cervical Vertebra, without Fracture.*—Dr. Whipham reports, in the *Lancet*, April 1882, p. 523, a singular case of this rare accident. A woman, aged 46 years, fell downstairs while drunk, on Dec. 24th, and was not attended to, further than being carried to her bed by her drunken companions, until December 26th, when she was admitted into the hospital and found to be paraplegic. She was sufficiently conscious to complain of pain in the back of the neck. On the 27th, she complained of no pain, and was perfectly conscious. Sensation was abolished over the abdomen, but she had feeling in the arms, neck, and head, also indistinct sensation over the upper part of the thorax. There was no facial paralysis, and the control of the sphincters was lost. The patient gradually sank, thirty hours after admission. On *post mortem* examination, the ligaments connecting the sixth and seventh cervical vertebræ, as well as the muscles in

the neighbourhood, were all completely torn through; the result being that there was complete dislocation of the one vertebra from the other. The intervertebral cartilage was much crushed, and remained attached to the upper part of the two vertebræ only. There was no fracture of the bones.

7. *Benham on the Treatment of Hæmorrhoids by Crushing.*—In the *Lancet*, April 1882, p. 602, Mr. R. F. Benham confirms, by statistical reports, the value of this mode of treatment, which was noticed in the LONDON MEDICAL RECORD, Oct. 1880, p. 416.

8. *Barwell on Boro-Glyceride in Operative Surgery.*—Mr. Richard Barwell, in the *Lancet*, May 1882, p. 774, recommends the use of the boro-glyceride, suggested by Professor Barff, for the preservation of meat, as a substitute for the carbolic acid spray in operative surgery, considering it safer, both locally and constitutionally, than carbolic acid. A few folds of lint, soaked in the solution (1 in 20), are placed on the well-washed wound, after the insertion of the necessary sutures, and then covered with mackintosh. The healing process takes place in the most beautiful and perfect manner.

9. *Marshall on Colectomy.*—Mr. John Marshall, in a clinical lecture, reported in the *Lancet*, May 1882, pp. 721, 771, enters exhaustively into the merits and demerits of this operation, for tumours or strictures of the colon. In the operation, the diseased part is excised, together with a good margin of healthy bowel, the open bowel being then stitched to the abdominal wound. Mr. Marshall's patient was a woman, aged 49, from whom an epitheliomatous tumour, as large as a hen's egg, was removed. The patient died on the third day. Six other cases of a similar nature have been reported, four of which lived months, one fifteen hours, one nine days, and Mr. Marshall's three days. In spite of the unfortunate issue in this instance, Mr. Marshall will approach another case of the same kind very hopefully.

R. NEALE, M.D.

10. *Rubio on the Treatment of Anthrax by Subcutaneous Injections of Carbolic Acid.*—Dr. Lopez Rubio records (*El Siglo Medico*, March 5, 1882) a case of anthrax, in which treatment by subcutaneous injection of carbolic acid—a plan first suggested by Dr. Olavide—gave very remarkable results. The anthrax occurred in a man aged 30 years, and was situated in the interscapular region. It measured when first seen, approximately, 7 inches vertically, by 5 horizontally, the centre being occupied by a cone of dark coloured sloughing skin. The constitutional disturbance was considerable, the pulse being 110, accompanied with pyrexia and severe headache. A 5 per cent. solution of carbolic acid, in water and alcohol, was injected, with a Pravaz's syringe, into each of the four quadrants of the tumour. Next day, the anthrax had decreased about one half in its superficial dimensions, its angry complexion had departed, while nearly all constitutional disturbance had ceased. The same treatment was continued for two days longer, when the patient had so far improved as to be able to return to his usual avocations.

LITTON FORBES.

11. *Obalinski on Ligature of the Common Carotid Artery for Facial Neuralgia.*—Dr. Obalinski (*Przeglad Lekarski*, 1881, No. 45), testifying to the great value of neurotomy in obstinate cases of facial neuralgia of periphery origin, records a case in which the presence of pain in the region of all three branches of the right fifth nerve and divergent strabismus of the right eye led him to recognise the central nature of the affection. At the necropsy, there was found

an aneurism of the right internal carotid, which compressed the trigeminus. Having regard to the not very rare occurrence of intracranial aneurisms (Brinton, Crisp, Zehender), and to the difficulty of diagnosis between them and neoplasms, the author recommends, in all cases of facial neuralgia of central origin, to tie the common carotid artery on the side of the affection (that is to say, Dr. Obalinski endorses the suggestion made once by Patruban). Following such course, the author hopes to be able, in some cases, at least, to considerably relieve, or even to cure, the sufferings of the patient. Should the operation prove inefficient, there would result no harm from it to the patient. [So thinks our author; it is hardly possible, however, to agree with him in regarding ligature of the common carotid as an innocent operation.—*Rep.*]

12. *Zinovieff on Tracheotomy as a Remedy in Affections of the Larynx.*—Dr. Zinovieff of Moscow (*Mediz. Obozr.*, Jan. 1882) reports seven cases of various acute and chronic laryngeal affections, in which he performed tracheotomy, not only for the vital indication, but as a remedy favouring the resolution of the inflammatory process, and so tending to re-establish the normal lumen of the larynx. A careful study of these cases enables the author to put forward the following propositions. 1. Tracheotomy, by temporarily removing the larynx from the category of respiratory organs, places it under the conditions of absolute physiological rest, in which the larynx is not further irritated either by the air-currents or by muscular movements (breathing and speaking). Probably, for this reason, the operation favours the more rapid absorption of œdema and infiltration, and so removes the inflammatory laryngeal stenosis. 2. The value of tracheotomy as a therapeutic remedy is more striking in acute cases, but it is not to be denied in chronic cases. 3. The absorption of inflammatory products takes place more rapidly in cases where no local irritants are used after the operation. 4. As it is well-known, the process of absorption takes place more rapidly in stronger subjects; hence, the operation is to be performed, not only in states of extreme dyspnoea and poisoning of the blood by carbonic anhydride, but in an earlier stage, when the system is still healthy, and as soon as laryngoscopic examination has detected the changes which are liable to produce closure of the rima glottidis and dyspnoea. 5. Surgically, tracheotomy is free from any serious danger. V. IDELSON, M.D.

13. *Buchanan on Nerve-Stretching in Locomotor Ataxy.*—Dr. George Buchanan (*Glasgow Med. Jour.*, April 1882) has stretched both sciatic nerves in a case of locomotor ataxy of five years' standing, for violent pains in the legs. The result was to produce considerable improvement in the gait, and complete disappearance of the lightning pains, with considerable amelioration of the patient's general condition. After the left sciatic nerve had been stretched, peculiar athetosis-like movements were noticed in the toes; and this symptom still continued, coming on each day, and lasting for about an hour.

14. *Norris on Anæsthetics in Bright's Disease.*—Dr. W. F. Norris (*American Ophthalm. Soc. Trans.*, 1881) has drawn attention to two cases of death after operations for cataract. The patients were both anæsthetised with sulphuric ether; both entirely recovered consciousness, but died comatose, one a few hours, the other eighteen days after the operation, and in both a careful necropsy revealed no organic lesion, except Bright's disease of the kidneys. In

his opinion, both deaths were due to congestion of the already diseased kidneys by the administration of ether. [The reporter has seen coma come on in more than one case after operation in which ether had been used, in which the only explanation appeared to be the contracted state of the kidneys.—*Rep.*]

ROBERT SAUNDBY, M.D.

15. *Samier on the Treatment of Warts on the Sole of the Foot, and the Palm of the Hand.*—Dr. Samier, in his *Thèse de Paris*, 1880 (*Bull. Génér. de Thérap.*, March 30), remarks that warts have no inherent gravity; but from their situation may become troublesome to the patient, and even painful, so that it may be desirable to remove them. Warts under the nails often become the starting point of onychia, and are very painful. In pedunculated warts, constriction with a silk thread, or with horsehair, may be performed. When situated on the hands or on the face, or wherever the epidermis is too thick, and does not offer too much resistance, frequent cauterisation with acetic, nitric, or chromic acid may be sufficient. In the palm of the hand, or on the sole of the foot, abrasion must be resorted to, after which Vienna paste, or arsenical paste, may be applied. The tumour may also be removed by a bistoury, and cotton-wool dressing be afterwards applied.

16. *Wolf on a Wound of the Liver: Recovery.*—Dr. Wolf (*Atlanta Med. Register*, March 1882) reports a case of recovery from a knife-wound of the liver. The right lobe was injured, and protruded through the external wound. The hæmorrhage was at first considerable, but was controlled by cold. The blood, on examination, was found to contain sugar. The febrile reaction was not great. The stools were of a light colour. The patient became icteric three days after the receipt of the wound, and there was retention of the urine, which, when drawn off by the catheter, was found to be dark and turbid. The patient made a good recovery; quinine and morphia being given internally.

17. *Hayes on Excision of the Knee.*—Mr. Hayes, of the Mater Misericordiæ Hospital, gives, in the *Dublin Jour. of Med. Science*, No. 2, 1882, a table of fourteen cases of excision of the knee in chronic disease, treated by himself, and in which the limbs were put up in an apparatus which experience of other methods had led him to devise. Eleven patients recovered with excellent limbs. In three cases, secondary amputation was required: of these, one recovered, one soon died of phthisis, and the third died within a week after the performance of the second operation. The success of this operation, in the practice of Mr. Hayes, and also in that of his colleagues, is attributed in great part to his method of retaining the limb during the after-treatment. After the leg and thigh have been encased in rollers of soft flannel, a splint is applied, which consists of two concave pieces of perforated iron, one moulded so as to fit the posterior surface of the leg, and the other adapted to receive the posterior surface of the thigh. These pieces are connected posteriorly by means of a strong, flat, but narrow bar of iron, so bent as to form an oblique step, about three inches in length, and having the end to which the leg-piece is attached exactly one inch in advance of that fixed to the thigh-piece. This apparatus is provided with pads arranged for leg and thigh, the pad for the leg being made thicker below than above, and then it is to be carefully adjusted behind the limb. A soft pad is now to be laid in front of the thigh near to its lower end, and upon this pad a concave piece of iron, about four inches long, by from two and a half to

three inches wide, is to be placed. The thigh is then firmly secured in the upper part of the splint by uniting both splint and limb with a strong strap, which is to be tightly buckled across the upper pad of the anterior small splint, whilst, lower down, the strap of a Petit's tourniquet is to be fixed, the brass-work of the tourniquet resting on the anterior splint. One or two turns of the tourniquet will firmly press back the lower end of the femur, so as to render the anterior surface of this bone level with the anterior surface of the tibia. The foot is then encased in several turns of a gypsum bandage, which is to be carried upwards, encircling the leg and lower part of the splint as high as the point at which the flannel bandage terminates. Whilst this is being accomplished, the foot must be held at right angles to the leg, lest extension of the ankle should occur, and prove a source of trouble at a later period. A foot-piece is altogether unnecessary, as the gypsum bandage constitutes a firm boot. The wound having been covered by antiseptic dressing, the limb is to be swung. This apparatus, Mr. Hayes states, forms a light, portable, and still very secure means for fixing the limb. The shortness of the thigh-piece, combined with suspension of the leg, enables the patient to assume the sitting posture, and to change position without risk or discomfort.

18. *Poinso on the Operative Treatment of Fracture of the Patella.*—M. Poinso of Bordeaux, in a contribution to the *Revue de Chir.*, No. 1, 1882, on operative intervention in cases of simple transverse fracture of the patella with effusion, after allusion to the rare occurrence of osseous consolidation after this injury, discusses the value, firstly, of puncture for the removal of effusion; and, secondly, of coaptation of the fragments by sutures. Separation of the fragments, in cases of transverse fracture, is due not only to muscular contraction, but also to intra-articular effusion, which takes place slowly, and becomes most marked on the second or third day. Hence, as is asserted by many surgeons, the removal of this effused fluid by puncture becomes a positive indication; and less scruple should now be held in applying such treatment, as it may be rendered quite harmless by the adoption of the antiseptic method. The cases that have been reported by Schede, Volkmann, and Labbé prove that puncture of the knee, with antiseptic precautions, in cases of fracture of the patella, is not usually followed by any serious result, and facilitates a sufficiently exact coaptation with further treatment by splints. In six out of nine recorded cases, there was close osseous union, allowing active extension of the leg. M. Poinso, who asserts that there can be no doubt as to the advantages of treatment by puncture, is of opinion that this operation should be practised in every case of moderate, as well as a considerable, effusion. It should be done without delay, as the effusion consists always of blood which may soon coagulate, especially in cases where there is free communication between the interior of the joint and the seat of fracture. Poinso prefers a small puncture and aspiration to any other plan of emptying the joint. Schede, in his cases, used a large trocar, and, after removal of the effused fluid, injected a solution of carbolic acid. The objections to this practice, as has been pointed out by Kocher, are the risks of poisoning by carbolic acid, and of irritation being set up within the joint by this agent. In two cases of recent fracture of the patella, under the care of Mr. Macnamara, puncture and aspiration were combined with subcutaneous section of the extensor tendon. In one of these cases there was osseous

union, and the two portions of bone had been so closely applied that it was impossible to make out the line of fracture. In every case in which the effused fluid is removed from the joint, the injured limb must subsequently be treated in the ordinary way by being extended, and fixed in a splint or a stiff bandage. M. Poinso recommends that, for some months after consolidation of the fracture, the knee be supported by an apparatus limiting flexion of the leg. In his remarks on the treatment of fracture of the patella by opening the joint with antiseptic precautions, and bringing the fragments together by metallic sutures, M. Poinso states that in every case in which this operation has been performed, the satisfactory results have been attained of adequate consolidation and of restoration of the functions of the knee. In seven of these cases at least, there seems to have been undoubted union by callus. In discussing the propriety of practising this as a general treatment of recent fracture of the patella, M. Poinso expresses a doubt whether, since the ordinary treatment usually results in adequate consolidation, and puncture is likely to remove the principal obstacle to coaptation of the fragments, the surgeon be justified, in the majority of cases, in subjecting his patient to the risks of an operation which the least neglect of any detail of antiseptic practice would render extremely dangerous. Still a wide field is open to this operation, and it is allowed by M. Poinso that it may be legitimately undertaken, firstly, in cases of recent fracture when puncture has failed to remove the intra-articular effusion; and, again, in old cases where there is considerable separation of the fragments, and the functions of the injured limb have been thus much impaired.

19. *Assaky on the Treatment of Chronic Abscesses by Injections of Alcohol.*—M. Assaky reports, in the *Gaz. Méd. de Paris*, Nos. 6 and 7, 1882, fourteen cases of chronic abscess treated after Professor Gosselin's method. This method consists in the injection of alcohol, and is based on the antiseptic properties of this agent, and its action on inflamed or suppurating tissues. An incision about a third of an inch in length is first made, and the abscess-cavity, after its contents have been discharged through this opening, is washed out with alcohol at 90 deg. The quantity of injected alcohol varies according to the dimensions of the abscess. It is necessary that the quantity be sufficient for application to the whole of the internal surface of the cavity. The seat of the emptied and injected abscess is then covered by a dressing of camphorated *eau-de-vie*. On the following day, there is an abundant secretion of dark-coloured and thick fluid. The secretion diminishes in quantity from day to day, and, as it diminishes, its density becomes lower, and its colour lighter. In the ultimate stage of the treatment, it presents a serous transparent fluid resembling lymph. When, on pressure, this serous fluid only can be forced out, and in small quantity, the abscess is on the point of becoming healed, there is no longer any cavity, the walls are adherent to each other, and there remains but the small incision, which closes in the course of two or three days. This method, M. Assaky states, has the following advantages: it necessitates only a small wound of the integument, and so there is less risk of the ordinary complications of wounds, and the cicatrix is small and is hardly apparent. The superiority of the method, however, consists chiefly in the considerable abridgment it effects in the duration of the treatment of chronic abscess. It is very evident, M. Assaky states, that the number of days

occupied in the healing of an abscess by this method must depend on the extent of the sac. But all other things being equal, the duration of treatment, in a case of abscess punctured and injected after Gosselin's method, is much less than that of one submitted to ordinary methods. In small abscesses, and those of medium size, cure may be effected between the second and seventh days. This treatment may be applied to any chronic abscess that is circumscribed, and consists of one regularly shaped cavity. In most cases, one injection only of alcohol is necessary; but when the abscess is very large, two or three may be required. The indication for a repetition of the injection would be a persistent purulent discharge. The injection of alcohol into the inflamed tissues, it is asserted, is not very painful. The pain varies with the sensitiveness of the patients. One will complain of lancinating pains, and of burning or pricking sensations which will last from ten minutes to an hour, whilst another will not complain of any painful sensation. Sometimes, though rarely, the injection of alcohol is followed by more or less extensive sloughing of the skin. This result has seemed to M. Assaky to have been usually associated with too long delay on the part of the patient in applying for treatment, so that the seat of the abscess has become much inflamed, and the skin hot, red, and very tense. Associated with this condition, there may be a further cause in some faulty diathetic condition of the patient.

20. *Kocher on Iodoform*.—Professor Kocher of Bern, in a paper on iodoform as a surgical dressing (*Centralbl. für Chirurg.*, Nos. 14 and 15, 1882), states that the recent extravagant praise of this agent as an antiseptic dressing, has already been followed by much disappointment. It is now generally admitted that, in the local treatment of wounds capable of healing by primary union, iodoform does not give better results than other antiseptic agents used for dressings. According to Mikulicz, in Billroth's practice, iodoform has been found less efficacious than Lister's dressing of antiseptic gauze. Iodoform is more useful as an application to deep and open wounds. The presence of an insoluble or but slightly soluble powder on the raw surface, prevents premature union of the more superficial parts of the wound; and, consequently, retention of discharge. Iodoform, though much weaker in its antiseptic action than carbolic acid and other antiseptic dressings, may still, it has been suggested, have some value as a dressing in consequence of its being but slightly soluble. In dressing a wound antiseptically, most surgeons would consider it desirable to use the weakest and least irritating agent, so long as this can act with thorough efficiency and for some time as an antiseptic. It has been proved that weak solutions of chloride of zinc and of salicylic acid are capable of rendering even extensive wounds antiseptic; but iodoform has the advantage of being an almost insoluble agent, and its antiseptic action, though relatively weak, can be maintained for a much longer period than that of stronger antiseptics in solution. Professor Kocher has found iodoform a dangerous dressing, and holds that, by reason of its toxic action, it ought at once to be removed from the list of surgical applications. He has observed no fewer than twenty-three cases, in which iodoform used in the treatment of recent wounds acted as a poison. The chief symptoms are excitement, restlessness, and mental depression. The patient sometimes becomes delirious, and has mental delusions. Attempts are occasionally made

to get out of bed at night and to wander. One case is reported in which an old man, with an open wound that had been covered by iodoform, was killed by breaking through a window. These symptoms, Kocher has found, at once cease on changing the iodoform for some other dressing. The local application of iodoform to a large fresh wound may be followed by total loss of memory and impairment of speech. In another case, after extirpation of cancerous disease of the rectum, and application of iodoform to the raw surfaces, the patient became very noisy and violent, and had what resembled an attack of acute mania. Kocher has also observed, after dressing with iodoform, complete loss of consciousness. In this form of poisoning, there is usually great difficulty in getting the patient to take nourishment. The bladder has to be relieved by catheterism; the limbs, more particularly the arms, become stiff and contracted, and finally, in very severe cases, collapse may occur. Iodoform, it is stated, accelerates the pulse to a high degree. Notwithstanding this increased frequency of the pulse, and the mental excitement and restlessness observed in cases of iodoform poisoning, fever is seldom, if ever, observed as one of the symptoms. The patient, after a prolonged toxic action of iodoform, passes into a chronic condition of restlessness, and suffers much from loss of sleep and impairment of nutrition. The poisoning, as a rule, is much more severe when coming on rapidly after a surgical operation, than when it is due to the prolonged action of iodoform. Kocher believes that iodoform gauze is as dangerous as the pure powder. As might be expected of so weak an antiseptic, iodoform, when used externally, and as a surgical dressing, has no influence on the spreading of an epidemic of erysipelas. Iodoform differs from pure iodine in its poisonous effects, as it does not give rise to any exanthem or to nasal catarrh, or cause vertigo. It often acts as a poison when it has been applied in small quantities, and when the amount of iodine given off must be far too small to account for such toxic effects. Then, again, the symptoms of iodoform poisoning may persist long after the disappearance of iodine from the urine and other excretions. According to Schede, iodoform is a cumulative poison, and prompt removal of this powder from a raw surface will not ensure the patient against persistent and increased extent and severity of bad symptoms. Iodoform poisoning, Kocher states, presents a condition similar to that produced by chronic chloroform poisoning. In both conditions the pulse is very high, and the patient suffers from mental depression, and finally passes into a state of collapse. In severe and critical cases of iodoform poisoning, as in those of slow poisoning by chloroform, the most promising treatment is stated to consist in injection into the circulatory system of a solution of chloride of sodium. More than twelve fatal cases of iodoform poisoning have, it is stated, been reported during the past twelve months by a small circle of surgeons, and Kocher thinks that probably there have been from twenty-three to twenty-five such cases. It is held that iodoform ought at once to be officially rejected from our list of remedies. With such rejection there will not be any loss, since, as an insoluble antiseptic application, subnitrate of bismuth is quite as efficacious as iodoform, and at the same time costs less and is free from unpleasant odour.

W. JOHNSON SMITH.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. FRANKEL.—On the Diagnosis and Operative Treatment of Extra-uterine Pregnancy. (*Breslauer Aerzt. Zeit.*, 1882, No. 7.)
2. HAIDLEN.—The Question of Total Extirpation of the Uterus. (*Archiv für Gynäkol.*, Band xix, Heft 1.)
3. LEOSCHIN, LÉON.—On the Use of Iodoform in Ovariectomy. (*Annal. de Gynéc.*, April 1882.)
4. MANN, J.—Decapitation with the Wire Écraseur.—(*Centrabl. für Gynäk.*, May 27, 1882.)
5. MARCHIONNESCHI.—On the Lochia. (*Annali di Ostetr. Ginecol. e Pediatria*, Nov. 1881 to Jan. 1882.)
6. MORÈ.—Amenorrhœa giving rise to Fæcal Vomiting. (*Four. de Méd. de Paris*, 20th May 1882.)
7. OUSPENSKY.—Hysterical Deafness. (*Four. de Méd. de Paris*, 20th May 1882.)
8. STARK.—Case of Total Extirpation of Cancerous Uterus through the Vagina. Removal of a Portion of the Involved Uterus, with Subsequent Extirpation of the Corresponding Kidney. Recovery. (*Berl. Klin. Woch.*, 1882, No. 12.)
9. WEIDLING, L.—The Prognosis of Labour in Contracted Pelvis. (*Inaug. Diss.*, Halle, 1882.)
10. WEISSENBORG.—Intra-uterine Medication with Iodoform in Chronic Endometritis. (*Berl. Klin. Woch.*, 1882, No. 11.)
11. WHITWELL, W. S.—The Treatment of Abortion by Hot Water Injections. (*The West. Lancet*, April 1882.)
12. HUNTER.—Simultaneous Tracheal Rhy and Perineography. (*New York Med. Jour. and Obstet. Rev.*, May.)
13. RODINSTEIN.—Prolonged Gestation. (*New York Med. Jour. and Obstet. Rev.*, May.)
14. BAKER.—Vaginal Ovariectomy. (*New York Med. Jour.*, March.)
15. CURRIER.—Removal of the Uterus in Ovariectomy. (*New York Med. Jour.*, March.)
16. BARTEE, E.—Menstruation and Metrorrhagia in Various Forms of Fever. (*Inaugural Dissertation*, St. Petersburg, 1881.)
17. BISCHOFF.—Successful Transfusion of an Alkaline Solution. (*Correspond. für Schweizer Aerzte*, Dec. 1, 1881.)

3. *Leoschin on the Use of Iodoform during Ovariectomy.*—Dr. Leoschin has employed iodoform in four cases of ovariectomy, but did not exactly measure the precise quantity introduced into the body in each case. In each case, the quantity of iodoform used was sufficient to cover with a thick layer of powder the whole of the cut surfaces of the pedicle and ligatures. The whole superficies of the abdominal wall, of the epiploon, and of the intestines at the points where adhesions had been broken down, was powdered with iodoform. Finally, every part of the peritoneum which had come into contact with the fingers or instruments was similarly dusted over with iodoform. Each ligature was covered with it, as well as the abdominal wound when sewn up. The dressing was completed with Lister's gauze, a large Neuber's cushion, and a large disinfected sponge to exercise pressure. Of these four cases of ovariectomy, three recovered without any complication, and without any febrile reaction. The wound in the abdomen healed under one dressing, which was replaced by a simple plaister bandage on the sixteenth, seventeenth, and twentieth days. When the dressing was removed, a strong odour of iodoform was perceptible, and a considerable quantity of the powder was found lying along the line of the abdominal wound. In one of these cases, the operation was very tedious. A suppurating cyst had contracted adhesions with

the surrounding parts over its whole surface. It was necessary to divide a large number of the adhesions, and to ligature them. When the cyst was punctured with the trocar, it was impossible to prevent the escape of a large quantity of purulent matter into the abdominal cavity. The peritoneal cavity was carefully cleansed with phenicated sponges, and a large quantity of iodoform was used. In the fourth case of ovariectomy, the patient was attacked with peritonitis, for which she still required treatment thirty-two days after the operation. In the other surgical operations in which Dr. Leoschin used the iodoform, he only had two cases in which convalescence was at all retarded. After the removal of an enormous fatty tumour, and an amputation of the breast, secondary hæmorrhage set in underneath the skin. Is this to be attributed to the influence of the iodoform? Because, two days after the operation, some ecchymoses appeared at points at some distance from the wound. There was no alteration of the blood, no marked anæmia, nor other cause to explain it. The high price of iodoform is compensated for by the saving which results in the other dressings required. In the above cases, the wounds were simply powdered with iodoform, and covered with a simple dry dressing of unprepared gauze, which is cheap.

6. *Morè on Fæcal Vomiting caused by Amenorrhœa.*—The patient, aged 30, healthy constitution, without previous morbid symptoms, had suffered for three days with obstinate constipation, pain in the abdomen, and frequent vomiting. Then fæcal vomiting set in. At first, it was supposed there might be a strangulated hernia, or an abdominal tumour; but this idea was abandoned, on account of no other symptom beyond the fæcal vomiting being present. In presence of this remarkable case, Dr. Morè confined himself to giving opiates and a draught of soda bicarbonate, which the patient vomited almost as soon as she had taken. It was also found impossible to get the medicine absorbed in the form of pills. The fæcal matter was vomited in such quantities that at one time nearly two litres were brought up. She was ordered sulphate of soda, enemata of sweet almond oil, and frictions of belladonna over the abdomen. Next day the vomiting was as bad as ever, and the abdominal pains worse, if anything. Ice was then tried, but without success. The ice was, however, continued, and colocynth and aloes pills were given. The next day, the patient only vomited fæcal matter once during the day, and once during the night. At the same time, she pointed out to her physician that the menstrual flow was commencing, although only in small quantity. She added that the menstrual period was due the preceding week, but that it had been suppressed by a moral emotion. The onset of the vomiting thus coincided with the suppression of the menstrual flow. The menstrual flow was now encouraged, and, as it increased, the vomiting gradually disappeared. The stomach retained food and drink, and fifteen days after the first fæcal vomiting she was completely cured.

8. *Stark on Total Extirpation of the Uterus through the Vagina.*—The patient, aged 42, had the whole of the vaginal portion of the cervix eaten away with cancer. The growth had extended on the right side a distance of from 3 to 4 centimètres into the vagina. The uterus was movable. The patient complained of pains in the region of the right kidney. The operation of removing the uterus was tedious. Dr. Stark could not succeed in separating the right

ureter from the surrounding diseased tissue. Finally, the ureter was cut through. The vaginal wound was not sewn up. A thick drainage-tube was left in the wound. No unfavourable symptoms appeared until the third day, when severe pain in the right kidney set in. In the evening, urine was found flowing in the vagina. The patient was feverish. The wound, which had healed, was reopened, and washed out with carbolic solution. The temperature then fell. On the sixth day after the original operation, it was determined to remove the right kidney. This was carried out on the plan of Simon. The wound healed by first intention. By the fifteenth day, the abdominal wound was completely closed. At the end of three months, there was no return of the disease.

10. *Weissenborg on Iodoform in Chronic Endometritis.*—The author recommends the application of iodoform in chlorotic and scrofulous women, in whom tuberculosis might be suspected. He introduces the iodoform in five-gramme doses through an instrument resembling a hollow sound, with two side openings.

11. *Whitwell on the Treatment of Abortion by Hot Water Injections.*—Dr. Whitwell states that the advantages of injecting hot water into the uterus and vagina in the treatment of abortion are these. 1. The existing hæmorrhage is stopped almost instantly, and there is but little liability of return while the douche is continued. 2. There is seldom necessity for instrumental interference. 3. The patient, who may be in a state of partial collapse, is revived by the application of heat. 4. The keeping the vagina full of water allows the hand to operate with greater freedom. 5. There being no fear of hæmorrhage, the operator can work leisurely, and violence is unpardonable. 6. By carbolicising the water, septicæmia is guarded against; and, lastly, nothing can be suggested which would be more likely to save the patient from pelvic inflammation, with its attendant evils. Dr. Whitwell's practice is as follows. Supposing the miscarriage inevitable, should the os be closed and the hæmorrhage not severe, and from the indications it appeared safe to temporise, he would tampon the vagina as thoroughly as possible with either styptic cotton or simple carbolicised wads of absorbent cotton. The chances are that, when this was taken away, the os would be found to be dilated, and the ovum ready to be discharged into the vagina. If the os were closed, the membranes having ruptured, and it were necessary to take active measures at once, Dr. Whitwell would advise the use of an anæsthetic, feeling sure that dilatation would then be a matter of little difficulty. If, on the other hand, the os were open and the ovum presenting, he would inject the hot water into the vagina, and thus stimulate the contractions of the uterus. If this were not sufficient, either the nozzle of the syringe or an attached catheter could be passed within the cervix, and the hot water be slowly injected. Under this stimulus, the womb would quickly force the ovum into the vagina with but little manual assistance, and all hæmorrhage would cease. Should there, unfortunately, be any retention of a portion of the ovum or membranes, he would wait, and use the hot water again as soon as any oozing appeared. FANCOURT BARNES, M.D.

12. *Hunter on Simultaneous Tracheloraphy and Perineoraphy.*—In a contribution published in the *New York Med. Jour. and Obstet. Rev.* for May 1882, Dr. James B. Hunter, Surgeon to the Woman's Hospital, gives a number of cases of prolapsus uteri

and of laceration of the cervix and perinæum, remarking that extraordinary cases are sure to be fully described, while those of every-day occurrence are often passed over as of little consequence. In the belief that the latter possess some interest and value to many readers, he purposes to present sketches of a few cases as they occur in his service. In regard to the performance of Emmet's operation for laceration of the cervix and the operation for lacerated perinæum, both at the same time, he states that several years ago he tried this method in a hospital patient, who could not remain long enough to have the operations done at the usual interval of two or three weeks. It succeeded so well that he has since done the double operation frequently, both in hospital and in private practice, and has never had occasion to regret it. If, however, the laceration of the cervix be very extensive, or any condition exist that renders hæmorrhage probable, he always does the operations separately. Sometimes, too, it is not desirable to keep the patient long under ether, in which case the operations should not be done at the same time. The disadvantages of the double operation are—that it is impossible to reach the cervix, if it should be necessary, without sacrificing the new perinæum; that the patient is longer under the influence of ether; and that the sutures cannot be removed from the cervix so soon. The advantages are—that the patient takes ether only once, and that she and her friends are spared the preparation (always somewhat formidable in a private family) for two operations; that there is an economy in time, as she lies in bed no longer than if the operation on the perinæum alone had been done; that a delicate patient suffers less fatigue, and is less emaciated, than she would be after having gone through two separate operations. He usually removes the sutures from the perinæum on the eighth day, and those from the cervix two weeks later, though with care the latter may be safely taken out earlier; while, on the other hand, there is no objection to letting them remain a month if it be convenient to do so, as they cause no irritation or inconvenience if the twisted ends of the wire be properly bent over and out of the way. While, therefore, he does not recommend the double operation as a rule, he considers it practicable in many cases, and often prefers to do it.

13. *Rodenstein on Prolonged Gestation.*—In the May number of the *New York Med. Jour. and Obstet. Rev.*, Dr. Louis A. Rodenstein reports four cases of prolonged gestation, and remarks that the number of cases cited upon undoubted authority by every writer on obstetrics, and the cases constantly reported as occurring under the personal observation of general practitioners, go to show that prolonged gestation is not a myth, and especially that it should not be explained away by questioning the virtue of the mother. How long the duration of the period of gestation can extend beyond the normal time is not yet determined, perhaps cannot be determined, but that it may extend over two months is apparently settled. The same principle is involved, whether the uterus tolerates the presence of the child three days or one hundred and forty-five days (Professor Meigs's *Report*) after the natural term of gestation has expired. He believes that, after the uterus has performed its physiological function of gestation for the natural term, it rests from the work of gestation proper. Why does it not, then, exercise the function of expulsion? That question he does not attempt to answer, but believes that, after

gestation has performed its proper and peculiar work, the growth of the child is complete, and it thereafter lies dormant in the womb. Otherwise, the child would grow to huge size, and its delivery in the natural way would be impossible; whereas, in the cases cited, the size of the child at the expiration of the period of prolonged gestation was normal.

14. *Baker on Vaginal Ovariectomy.*—In the March number of the *New York Med. Jour.*, Dr. W. H. Baker relates a case in which he found a suppurating dermoid cyst of the ovary *per vaginam*, and remarks that the success which now attends ovariectomy by abdominal incision renders the cases very few in which removal by the vagina would be the better method. He would limit it, first, to cases where the cysts are small and their contents bland, so that removal can be effected without difficulty, and without great danger of septic peritonitis from the escape of any of the fluid into the peritoneal cavity; second, to dermoid cysts so small as to be removed through the vaginal incision without evacuation. In the case of an ovarian cyst firmly adherent in the pelvis, he believes the best operation to be that of drainage into the vagina, with subsequent destruction by suppuration or by the cautery.

15. *Currier on Removal of the Uterus in Ovariectomy.*—In the *New York Med. Jour.* for March 1882, Dr. Andrew F. Currier relates a case of removal of the uterus in connection with a multilocular ovarian cystoma, performed by Dr. T. Gailard Thomas; and remarks that to remove a simple free ovarian cyst is not a difficult operation, but that such tumours are not to be looked for in the majority of cases. From the record of more than fifty laparotomies performed at the Woman's Hospital during twelve working months, he finds only nine done for ovarian tumours unattached to surrounding viscera. In several of these, other serious complications were present. The adhesions in the remaining cases were more or less firm, involving the necessary risks of hæmorrhage, septicæmia, and peritonitis. Three out of the entire number held such intimate organic relations to the uterus, as to call for the removal of that organ. In one other case, the uterus was removed on account of a growth developed from it. In others, the portion of sac attached to the uterus was left. The ovariectomist should be prepared to take the bold step of removing the uterus when it is called for by such complications.

16. *Bartel on Menstruation and Metrorrhagia in Typhus, Recurrent, and Enteric Fever.*—In order to throw some light on the influence of the typhus process on the menses, and hæmorrhage from the genitals in general, Dr. Bartel (*St. Petersb. Inaug. Diss.*, 1881) undertook observations upon 172 female patients (79 of them had petechial typhus, 50 enteric, and 43 recurrent), which led him to the following conclusions. 1. The influence of various typhus forms on the appearance of menstruation depends on the interval between the beginning of the disease and the regular menstrual date. 2. Should the menses be expected within first five days of the disease, they will surely appear as usual; if within from six to fourteen days, they will more probably appear than not. Should the menstrual date lie beyond a fortnight from the commencement of the disease, the appearance of the catamenia is not to be expected. 3. Generally, the menses are oftener suppressed in cases of enteric fever than in typhus or recurrent. 4. In 54.32 per cent. of all Bartel's cases, the menses appeared in due time; in 8.64 per cent. they came irregularly; in 37.03 per cent. they

did not appear at all. 5. The influence of various typhus forms on the character of the menstrual discharge (when such appears) is not great. It is least in cases of enteric fever; typhus rather diminishes the quantity of discharge; recurrent fever rather increases it. 6. Second and third appearances of menses in typhus patients are very rare. There is nearly always amenorrhœa. 7. Pseudomenstruation, or non-menstrual sanguineous discharge from the genitals in the course of various typhus forms, appears rarely (only in 3.48 per cent. of all cases), and still more rarely is it profuse. It is comparatively oftener observed in exanthematic typhus. The author never saw pseudomenstruation in patients who had not yet begun or who had ceased to menstruate. V. IDELSON, M.D.

17. *Bischoff on Successful Transfusion of an Alkaline Solution.*—Dr. Bischoff reports (*Correspondenzbl. für Schweiz. Aerzte.*, Dec. 1, 1881) a case of *post partum* hæmorrhage, in which the patient was in a state of extreme collapse, pulseless, respiration 42, cold extremities, etc., and could not be relieved by posture and stimulants. The left radial artery was exposed, divided, and the central end ligatured; a vulcanite cannula was passed into the distal end of the vessel, and through this, by means of a piece of India-rubber tube and a funnel, previously purified by immersion in carbolic lotion, 1,250 grammes of a six-tenths per cent. solution of sodium chloride, alkalised by the addition of two drops of liquor potassæ, were injected in the course of an hour. During the transfusion, the patient rallied, the pulse was 122, and she finally recovered. He points out that there were none of the usual signs of oppression, etc., met with in other cases of transfusion. He thinks the amount injected should be at least 500 grammes (about a pint), and that liquor sodæ should by preference be used to render the solution alkaline. R. SAUNDBY, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1. FRANÇOIS-FRANCK.—The Causes of the Normal Jugular Pulse. (*Jour. de Méd. de Paris*, No. 11, 1882.)
2. LONDON.—Absorption from the Bladder. (*Berl. Klin. Woch.*, 1881, No. 11.)
3. BUBNOFF and HEIDENHAIN.—The Phenomena of Irritation and Inhibition in the Motor Cerebral Centres. (*Pflüger's Archiv*, Band xxvi.)
4. LOVEN.—The Muscle-Tonus in Electric Irritation (*Arch. für Anat. und Phys.*, 1881.)
5. MARCACCI.—The Cortical Motor Centres. (*Comptes Rendus de la Soc. de Biol.*, Nos. 4 and 5, 1882.)
6. LESENEVICH.—Secretion of Milk in a Boy, Ten Months Old. (*Vracheb. Vedom.*, No. 10, 1882.)
7. CADET.—The Figurative Elements of the Blood. (*Jour. de Thérap.*, Feb. 10, 1882.)
8. LEWASCHOFF.—The Method of Hæmodynamic Experiments. (*Klin. Gaz.*, No. 34, 1881.)

1. *François-Franck on the Causes of the Normal Jugular Pulse.*—M. François-Franck has communicated to the Société de Biologie (*Jour. de Méd. de Paris*, No. 11, 1882) the results of his experiments upon the production of this phenomenon. He finds that, when pericardial aspiration is excluded by opening the thorax, it persists; it persists, also, when the communication is momentarily interrupted between the right ventricle and the right auricle, and when

the ventricular systole is stopped by irritation of the vagus. It disappears when the systole of the auricle is produced by mechanical irritation or other means, and when the systole of the auricle is displaced so as to occupy a phase of the diastole. The venous pulse is also displaced. All these facts tend to the conclusion that the normal jugular pulse is produced by the systole of the right auricle.

2. *London on Absorption from the Bladder*.—Dr. B. London of Carlsbad (*Berl. Klin. Woch.*, No. 11, 1881) has made a series of chemical and histological investigations in Ludwig's laboratory, in order to determine the disputed point whether the mucous membrane of the healthy urinary bladder does or does not permit absorption. He found, on injecting into his own bladder weak solutions ($\frac{1}{2}$ per cent) of chloride of lithium and iodide of potassium, that traces of these could be detected in the saliva. As it has been said that distension of the bladder favours absorption, possibly by producing some mechanical alteration in the epithelium, he made a number of observations on the bladders of dogs, and found that no degree of distension caused either displacement or a solution of continuity of the epithelium, on account of its extraordinary elasticity, but that there was a decided change in the shape of the epithelial cells. R. SAUNDBY, M.D.

3. *Bubnoff and Heidenhain on the Phenomenon of Irritation and Inhibition within the Motor Cerebral Centres*.—This paper (*Pflüger's Archiv*, vol. xxvi, p. 137) contains observations confirmatory of those of François-Franck and Pitres, to the effect that electrical excitation suffers a delay in the cerebral grey matter, shewing that the cortex is a physiological conductor of that excitation. The authors state that sometimes, in the early stage of epileptic convulsions originating from localised cortical excitation, removal of the cortical centre of a limb may bring about quiescence of that limb. They remark that epileptic convulsions experimentally excited by cortical excitation always commence in muscles of the opposite side; that, after removal of the cortex on one side, epilepsy produced by excitation of the subjacent white matter always commences on the same side, and that, after bilateral ablation of the cortex, subcortical excitation never provokes an epileptic attack. These observations go to demonstrate that experimental epilepsy is the manifestation of a cortical activity which can extend to the opposite side of the cortex by commissural fibres.

4. *Loven on the Muscle-Tonus in Electric Irritation*.—Loven (*Arch. für Anat. und Physiol.*, 1881, p. 363) was surprised to find that he could hear the sound of muscle tetanised by faradisation in any other part of the body, as well as over the muscle itself; and it was clear that this tone depended on something else than the vibrations of muscular contraction, since it might be heard on long dead animals. Seeking to determine the conditions of this electro-acoustic phenomenon, he found it necessary for its production that the animal and observer should be separated by a moderately thick non-conductor. He records experiments which show that the phenomenon may be a source of fallacy under the ordinary conditions of myophonic experiments; it is especially liable to happen if strong currents be used, or if the electrode contact be deficient. The way to guard against it is to establish a good conductor between animal and observer.

5. *Marcacci on the Cortical Motor Centres*.—Marcacci (*Comptes Rendus de la Soc. de Biol.*, Nos. 4

and 5, 1882) says that movements excited by electrical currents applied to the surface of the brain are not changed or suppressed by freezing the cortex, nor by anæsthesia short of the suppression of spinal reflexes, nor by paraplegia produced by annular congelation of the medulla oblongata, nor by ligation of the brachiocephalic and left carotid arteries. After such ligation, chloralisation, which can now only affect the spinal cord, abolishes the effect of surface-excitation. Excitation of the so-called motor centre of a posterior extremity, producing no effect after section of the nerve-roots supplying that limb, causes, after such section, movements of the anterior extremity of the same side. From these observations, the author concludes that the cortical grey matter is physiologically indifferent with regard to direct excitation.

A. WALLER, M.D.

6. *Lesenevich on Secretion of Milk in a Boy Ten Months Old*.—Dr. Lesenevich (*Vracheb. Vedom.*, No. 10, 1882) has under his observation a boy to months old, whose both mammary glands secrete a milky fluid, and have done so since the child's birth. The glands have the shape of roundish soft tumours, of the size of a large nut. On moderate pressure, a few drops of milk ooze out; on rather strong compression of the gland, the milk is ejected in form of a thin jet, reaching the height of about three feet. When the glands are left untouched during two or three hours, the secretion oozes by itself, leaving grey spots on the linen. The fluid gathered in a wine-glass did not differ in any way from a woman's milk. V. IDELSON, M.D.

7. *Cadet on the Figurate Elements of the Blood, and especially the Hæmatoblasts*.—The researches described in Dr. Cadet's thesis, published in Paris in 1881 (*Jour. de Thérap.*, Feb. 10, 1882) were made by the methods and under the direction of M. Hayem. In the first part of his thesis, M. Cadet relates the history of the hæmatoblasts. M. Hayem has described under this name special elements in the blood, differing from the white and the red corpuscles, and which are themselves destined to become red corpuscles. These small corpuscles—much smaller than the other figurate elements of the blood—are also extremely fragile. They require for their observation special precautions and liquids which do not destroy them. It is, therefore, easy to understand how, through accident, they should have remained long unknown. The hæmatoblasts have been counted in 140 persons under various conditions of age, sex, health, etc. Many enumerations both of the red and the white corpuscles have been made. According to M. Cadet, the general average of hæmatoblasts in the human species is 245,000 in the cubic millimetre; of the red corpuscles, 5,200,000; and of the white, 8,200. The blood of old persons shows no special characteristics; the average of their red corpuscles is, however, slightly inferior. In new-born infants, the average of the hæmatoblasts is 171,200; that of the red corpuscles, 5,696,000; and that of the white corpuscles, 19,400. It will be noted that these figures are very different from those which precede them. The blood of infants is in all respects similar to that of the adult. The blood of women is entirely comparable with that of men, and the figurate elements are found in the same proportions. Menstruation induces an increase in the number of hæmatoblasts, and in that of the red corpuscles. A rather considerable number of 'dwarf corpuscles' are found in the blood, and the richness in hæmoglobin is slightly decreased. Prolonged fatigue brings on a very notable diminution in the

number of the red corpuscles. Rest induces a sensible augmentation in the number of the hæmatoblasts, a diminution of the red corpuscles, and an increase in the white corpuscles. More or less prolonged fasting produces a decrease in the number of the hæmatoblasts, a notable increase in the number of the red corpuscles, and a decrease in the number of the white corpuscles.

9. *Lewaschoff on the Method of Hæmodynamic Experiments.*—In order to diminish the coagulability of the blood in hæmodynamic experiments, this author recommends the following procedure (*Klin. Gas.*, No. 38, 1881). Blood is taken from another animal, carefully defibrinated and filtered. Then one of the smaller arteries and veins of the animal to be employed are exposed. Blood is taken from the artery, defibrinated, filtered, and added to the already prepared blood. This blood is then injected into the vein, and, if necessary, this may be repeated. So much reduced by this method is the coagulability of the blood, that the author has observed, for six to seven hours, the intravenous blood-pressure without anything interfering with the experiment. Seeing that coagulation is thus rendered so difficult, any operation involving hæmorrhage had better be performed beforehand. No accident to the life of the animal has occurred in the hands of the experimenter. JAMES ANDERSON, M.D.

SYPHIOGRAPHY.

RECENT PAPERS.

1. GÜNTZ.—On the Duration of the Incubation-Period of Syphilis, with cases in which symptoms were delayed for an unusual length of time. (*Memorab.*, Heft 7, 1881.)
2. MANNINO.—A Case of Syphilitic Myocarditis. (*Giorn. Ital. delle Mal. Ven. e della Pelle*, Fascic. vi, Dec. 1881.)
3. RASORI.—Excision of an Indurated Sore twelve hours after its appearance. (*Ibid.*)
4. REBATEL.—Experimental Inoculation of Venereal Diseases on Animals. (*Lyon Méd.*, Jan. 8, 1882.)
5. WHITE, J. W.—The Prevention of Syphilis. (*Philad. Med. Times*, Jan. 14, 1882.)
6. OTIS, F. N.—Non-specific Gonorrhœa. (*New York Med. Record*, Jan. 14, 1882.)
7. MITCHELL, C. J.—Gonorrhœa in the Male: its Nature, Causes, and Treatment. (*Med. and Surg. Reporter*, Feb. 18, 1882.)
8. NEUMANN.—Gumma of the Tongue. (*Allgem. Wiener Med. Zeitung*, No. 7, 1882.)
9. NEUMANN.—Syphilitic Ulceration of the Nose. (*Ibid.*)
10. AUBERT.—On Immediate Union after the Operation for Phimosis as a Complication of the Simple Chancre. (*Lyon Méd.*, Feb. 26, 1882.)
11. RICHEL.—On Caseous Epididymitis. (*Rev. Méd. de France et de l'Etranger*, March 4, 1882.)
12. RICHEL.—Syphiloma of the Tongue. (*Gaz. Med. de Paris*, March 11, 1882.)
13. FOX, G. H.—On the Use of Mercury and other Remedies in the Treatment of Syphilis. (*New York Med. Jour.*, March 1882.)
14. WHITEHEAD, W.—On the Use of Iodoform in the Treatment of Soft Sores. (*Brit. Med. Jour.*, March 11, 1882.)
15. SIGMUND.—On the Best Mode of Administering Mercury in the Treatment of Syphilis. (*Wiener Med. Woch.*, March 18, 1882.)
16. ROBERTS, J. W.—The Relation of Syphilis to Scrofula. (*Phil. Med. Times*, March 25, 1882.)
17. ASHHURST, J. JUN.—The Clinical History of Chancre and Chancroid. (*Ibid.*)

18. SNELL.—A Group of Syphilitic Inoculations caused by a Suckling Infant. (*Lancet*, April 1, 1882.)

19. LUBELSKI.—On the Propagation of Syphilis in Poland by the Circumcision of Jewish Children. (*Revue d'Hygiène et de Police Sanitaire*, July 1881, p. 577.)

1. Güntz on the Incubation-Period of Syphilis.—

In this paper, Dr. J. E. Güntz of Dresden discusses at some length the usual duration of the incubation-period of syphilis (*Memorabilien*, Heft 7, 1881), according to statistics collected by various authors, and concludes by giving notes of three cases, one being an instance of reinfection, observed by himself, in which the interval between contagion and the appearance of general symptoms was of unusual length. Case 1. A man, aged 30, who had never had syphilis, contracted a sore which had the appearance of a simple excoriation, but which remained unhealed sixty days after contagion. Specific treatment was then begun, and the sore healed in a few days. On the sixty-fourth day, there was slight tenderness in the right groin, but this disappeared in two days. There was no trace of syphilis, and his general health was good. On the eighty-sixth day after contagion, he had enlargement of the right inguinal glands, pains in the limbs, and roseola. Case 2. A married man, aged 54, presented himself twenty-eight days after exposure to contagion, with an innocent-looking excoriation. Under mild specific treatment, the sore healed twenty-eight days later, leaving a smooth, non-indurated, but somewhat depressed scar. Specific treatment was then discontinued. There were no signs of syphilis, the general health and appearance were good, and continued so until the hundred and twenty-third day after the suspicious coitus, when the patient had intercourse with his wife, and afterwards noticed a hard and rather tender cord along the dorsum penis, together with a tender gland, of the size of a bean, in the right groin. At this time there was no sign of syphilis, no lesion of the penis or in any other situation, and the scar of the former sore had quite disappeared. The wife also was examined by Dr. Güntz, and found to be healthy. On the hundred and thirty-first day after the suspicious coitus, a macular syphilide appeared. Case 3. A man, aged 38, came under the author's care for syphilis, and was treated by mercurial inunction. He afterwards married, and had healthy children. Eight years after the first attack, the patient again came to Dr. Güntz with the following history. The last coitus had taken place ninety-six days ago. Six days ago, the patient noticed pain in the penis and a chancrous ulcer. The ulcer was dressed with iodoform, and seven days later (one hundred and third after coitus), was disposed to heal, but there was slight hardness about its base, together with tenderness in one groin. On the hundred and eleventh day the sore was rapidly healing, the inguinal tenderness had disappeared, and specific treatment was begun. Nine days afterwards (hundred and twentieth since coitus), the scar was slightly excoriated, and there was pain but no swelling in the groin, and there were no signs of syphilis. Three days later, the cicatrix was clearly indurated (cartilaginous) and there were several scattered raised syphilitic papules on the body. During the following week, more extensive signs of syphilis appeared. The author remarks that the mild specific treatment adopted in these cases is not, in his opinion, sufficient to account for the long incubation.

2. Mannino on a Case of Syphilitic Myocarditis.—

Dr. Mannino, of Palermo, reports the following case, in which syphilitic disease of the heart was diagnosed during life (*Giorn. Ital. delle Mal. Ven. e della Pelle*, Dec. 1881). A man, aged 36, was admitted into hospital, under the care of Dr. Federici, on Feb. 15, 1880. The patient stated that he had always enjoyed good health until eight years previously, when he contracted some venereal affection, which was followed by pains all over the body. He took iodide of potassium for a month, and was then able to resume his work; but since that time he had suffered every autumn and winter from a pustular eruption on the legs. With this exception his general health had been good, until a few months before admission, when he began to suffer from occasional difficulty of breathing. The attacks of dyspnoea gradually increased in severity; a troublesome cough appeared; and finally the patient became unable to work, and applied for admission into the hospital. On admission, the man was in a very weak state, his chief complaint being of difficulty in breathing. Cough was troublesome; the belly was swollen; both legs were oedematous and covered with coppery stains, scaly patches, pustules, and ulcers, which were considered to be of a syphilitic nature. Several groups of lymphatic glands were enlarged. The cheeks, lips and nose were blue; the great veins of the neck were prominent and turgid, while pulsation in the arteries was very weak. The skin of the trunk and neck had a mottled appearance, and the pulse was imperceptible at the wrist. The hands were cold. The heart's impulse was diffused, and pulsation was also visible in the epigastrium to the left of the sternal line. The exact situation of the apex-beat could not be defined, but the area of cardiac dullness was normal, the lowest limit being the fifth intercostal space. At the apex the first sound was obscure, and accompanied by a very faint blowing murmur. At the base, and in the second right intercostal space, the *bruit* was somewhat louder; but was much more distinctly heard in the epigastrium than elsewhere. The diastole was weak, but clear. The percussion sound was normal over the front of the chest; the posterior thoracic parietes were oedematous. The respiratory sounds were normal, except in a few places where slight mucous *râles* were audible. The area of dullness was the liver and spleen somewhat increased. The urine was scanty, acid, specific gravity 1.025, and contained traces of albumen. From these various signs, Dr. Federici diagnosed that the muscular structure of the right side of the heart was chiefly at fault, and that the disease was probably of a syphilitic nature. In spite of hypodermic injections of mercury, and large doses of iodide of potassium, the attacks of dyspnoea became more and more severe, especially at night; but the patient slept fairly well in a semi-erect position. The pulse was regular and about normal as regards frequency; but pulsation could never be felt in the radials, and even in the larger vessels, such as the femoral, was very weak indeed. The respiration was always accelerated (sometimes thirty per minute), and chiefly abdominal in character. The temperature was usually below normal. During the next few days the *bruit* gradually became fainter and fainter; but was always heard best at the epigastrium. The sputa became bloody, the dyspnoea more and more urgent, until, finally, the patient died rather suddenly, soon after a meal, nine days after his admission into the hospital. *Post mortem*, the pericardium contained about 3 ounces of clear serum. The heart was globular

in form, and weighed nearly 14 oz., the enlargement being due more to the left than the right ventricle. On the anterior surface of the right ventricle was a patch of fibrous induration, 8 centimètres long and 3 centimètres broad. On the left ventricle was a similar patch, of the size of a five-franc piece; and other smaller indurated patches were scattered over the surface. A hard fibrous cord, studded with nodules, followed the direction of the interventricular septum. All these parts were pale in colour, resisted the knife, and creaked on section. The tricuspid valve was healthy, with the exception of a slight enlargement on one of the cusps. The endocardium was opaque in patches. The left ventricle was considerably dilated, and the endocardium of the conus arteriosus was white, hard, and glistening, like cartilage. The muscoli papillares of both ventricles were pale and shrunken. Under the microscope, the affected portions of the muscular substance showed the usual appearances of syphilitic myositis. The lungs were adherent in some places, emphysematous in others, and contained numerous infarcts. The liver showed a patch of syphilitic interstitial hepatitis in an early stage. The spleen was enlarged and rather hard, its capsule being opaque and partially adherent to the thoracic wall. The kidneys were much congested. The other organs of the body, as well as the larger blood-vessels, were healthy.

3. *Rasori on Excision of an Indurated Sore Twelve Hours after its Appearance*.—Dr. Enrico Rasori of Rome relates the particulars of a case (*Giorn. Ital. delle Mal. Ven. e della Pelle*, Dec. 1881), in which he excised the initial lesion of syphilis within twelve hours of its appearance, without preventing, or, as far as could be judged, in any way modifying, the subsequent symptoms of the disease. This initial lesion, which was on the inner surface of the prepuce, and had the form of a slightly elevated lenticular papule, appeared twenty-eight days after contagion. Excision was performed the same day. The wound healed in twenty-five days, and roseola appeared forty-eight days after the excision, or seventy-six after contagion. The inguinal glands became somewhat enlarged nine days after coitus, in connection with irritation produced by the application of some so-called preventive by the patient himself; and this enlargement continued during the incubation period. [The exact condition of the glands at the time of excision of the sore is not stated.—*Rep.*]

4. *Rebatel on the Inoculation of Venereal Diseases on Animals*.—In a paper read before the Society of Medical Sciences of Lyons (*Lyons Méd.*, No. 2, 1882), M. Rebatel relates the results of numerous experiments by himself, as well as of others carried out by M. Blanc, an *interne* of the Lyons Hospital. As regards *gonorrhœal pus*, the author states that in a large number of dogs, rabbits, and guinea pigs, he placed the matter in contact with the mucous membrane of the eye and of the glans penis, besides, also, injecting it into the urethra with a syringe. In all these cases, as well as in others experimented on by M. Blanc, the result was entirely negative, no trace of inflammation being set up. With the pus of the *simple chancre*, also, a very large number of experiments were made, and, although every precaution was taken to keep the chancrous pus in contact with the site of inoculation, no ulcer of any kind was ever produced. M. Blanc also experimented, independently of M. Aubert, in various ways. Thus, in M. Blanc's first group of fourteen experiments on dogs and rabbits, the chancrous matter was inserted

beneath the skin with a bistoury, on various parts of the body, which had been previously shaved. In a second series of eleven cases, the pus was deposited on a shaved surface, which was then scarified. In a third series of nine cases, after inoculation with a bistoury, the part was thoroughly protected with collodion and gold-beater's skin until the next day. In eighteen experiments, again, chancrous pus, varying in quantity from half a drop to ten drops, was injected beneath the skin. In some of the cases, also, the point of inoculation was irritated with various substances to imitate the conditions under which Auzias Turenne's experiments were carried out. Finally, in one case, an inguinal gland was exposed, and pus from a virulent bubo was injected into its substance. The wound healed by adhesion, and, three days afterwards, all traces of the operation had disappeared. Numerous experiments with the syphilitic virus were also invariably unsuccessful. In one case of this kind, a small incision was made in each groin of a young and healthy bitch. The cellular tissue was then slightly separated by means of a director, and two indurated syphilitic sores, which had been excised just before, were introduced, and the wounds closed by sutures. Union by first intention took place. A little swelling remained for a few days, but at the end of a week had quite disappeared. The glands of the groin did not become enlarged, and the animal, though kept under observation for many months, showed no further symptoms. About the same time, M. Rebatel injected into the jugular vein of a young dog about 150 grammes of defibrinated blood from a patient, in whom secondary symptoms were in full activity. This animal, again, showed no signs of syphilis. The offspring of these two animals, also, procreated after the performance of these experiments, were perfectly healthy.

5. *White on the Prevention of Syphilis.*—In this address, which was read before the County Medical Society of Philadelphia (*Philadelphia Med. Times*, Jan. 14, 1882), Dr. J. W. White ably discusses the question of legislative interference for the prevention of the spread of venereal diseases, and adduces numerous facts and statistics, including some of those lately brought before the Select Committee of the House of Commons in this country, which clearly show the value of preventive measures in checking the prevalence of disease wherever they have been properly carried out. Dr. White brings forward ample evidence in support of his plea for the introduction of some such measures into his own country. Dr. White's paper is also published separately in the form of a pamphlet.

10. *Aubert on immediate Union after Circumcision for Phimosis complicating simple Chancre.*—M. Aubert reports (*Lyon Méd.*, No. 9, 1882) six cases in which he obtained primary union after circumcision for phimosis with soft chancres. In two cases there was œdema, and in one lymphitis, and abscess of the penis. The following is M. Aubert's method of operating. All the surrounding parts are cleansed with carbolic lotion. The penis is then passed through a hole cut in a large sheet of India-rubber sheeting, so that discharge and blood may not collect among the pubic hair, and so become a source of re-inoculation of the wound. The patient is then anaesthetised, and all the sores which are within reach are touched with the thermo-cautery. This having been done, the prepuce is divided at one or more places (several shallow cuts being better than one long one, in order that the incisions may all be

included in the subsequent circumcision wound), until it can be fully retracted. The parts are then again washed with carbolic lotion, and all the remaining chancres are cauterised. The operator and his assistants now cleanse their hands, and circumcision is performed with fresh instruments and clean sponges, etc. Lastly, the edges of the wound are united with sutures in the ordinary way. No re-inoculation of the wound occurred in any of the six cases; and the author suggests that, if his method of operating be adopted, circumcision is applicable not only to bad cases, but also to those where phimosis is the only complication.

11. *Richet on Caseous Epididymitis.*—Professor Richet, in a clinical lecture published in the *Revue Méd. de France et de l'Etranger*, March 4, 1882, remarks that Louis long ago recognised a local tuberculosis of the genital organs, as well as the form which is associated with general tuberculosis. The case which formed the subject of these remarks was that of a young man, who came under M. Richet's care, after repeated attacks of gonorrhœa, with enlargement of both testes, which was at first thought to be due to syphilis, but, as long-continued specific treatment had no good effect, the man was admitted into hospital in the following condition. Both testes and both spermatic cords were enlarged and nodular. There was double hydrocele. The prostate was irregular, and the right vesicula seminalis enlarged. On pressure per rectum, a bloody fluid exuded from the urethra. With all these signs of extensive disease of the generative organs, the patient's health remained good; he had no cough, and there were no signs of disease of the lungs. Hence, M. Richet diagnosed a localised caseous epididymitis set up by gradual extension of gonorrhœal pus along the vas deferens to the prostate, and gave a favourable prognosis. The treatment proposed was to tap the hydroceles and inject them with iodine, and to administer iodine internally; and under this treatment the author expected the patient to recover, as had happened in several similar cases under his care, at least as regarded the general health, the function of the testes being, of course, in all probability destroyed. In one case, M. Richet had excised the useless organs.

18. *Snell on a Group of Syphilitic Inoculations Caused by a Suckling Infant.*—Mr. Simeon Snell of Sheffield reports (*Lancet*, April 1, 1882) the particulars of several cases of syphilis, which well show the disastrous consequences of allowing a healthy woman to suckle a syphilitic child. The main points of the cases are briefly as follows. A healthy woman, aged 26, whose own child was three weeks old, was engaged as wet-nurse to a baby, aged three months, suffering from diarrhœa, emaciation, 'thrush', and a rash on its body. This child was the ninth, and all the others of the same family had been either still-born or had died in infancy. During one night the nurse suckled both her own baby and that of her employer at the same (right) breast; but next day her own baby was sent back to Sheffield to be suckled by its grandmother, who also had an infant of her own a few weeks old. The wet-nurse retained her situation, and, continued to suckle the strange baby for about a fortnight, when, hearing that her own child was ill, she returned home and again suckled it. Shortly after her return, she noticed a soreness at the upper part of the right breast, and, as this soreness caused discomfort when the child was put to the breast, it was again partially suckled by its grandmother. A sore, however, soon

appeared on the child's upper lip. This was followed by 'thrush', and the child eventually died. The originally syphilitic child recovered under mercury. The grandmother also contracted syphilis, and came to the Sheffield Infirmary with an indurated sore of the right breast, which was followed by general syphilitic symptoms, among others, iritis, for which she subsequently came under Mr. Snell's care. Her own child, however, appeared to have escaped. It is worthy of remark, that this child was nearly weaned when she began suckling her grandchild, and that she always suckled her own baby at the left breast, reserving the right exclusively for her grandchild. Thus, at least three persons, viz., the wet-nurse, her child, and her mother, became syphilitic through the suckling of a child well known to be diseased. The nurse is stated to have been warned of the risk she incurred, and was desired, if she remained, as the parents were anxious for her to do, to be particularly careful and cleanly as to the breast. Besides these known cases of syphilis, another wet-nurse had been employed before the one now in question, and her child was found, by subsequent inquiry, to have died, but, beyond this, nothing further was ascertained. The facts above-mentioned came to Mr. Snell's knowledge partly through the wet-nurse's mother, who came to him with iritis, and subsequently through the wet-nurse herself, and partly through the medical attendant of the family for whose syphilitic child the wet-nurse was engaged.

19. *Lubelski on the Propagation of Syphilis in Poland by the Circumcision of Jewish Children.*—In this paper (*Rev. d'Hygiène et de Police Sanitaire*, July 1881, p. 577) Dr. Lubelski of Warsaw, refers only to the writings of others. Thus, he states that in 1833 Bierkowski of Cracow reported more than a hundred cases, in which syphilis had been communicated to children by suction of the wound by the operator after circumcision. In 1864 and 1865 Nowakowski reported numerous cases of a similar kind. In 1880 there was published in the Polish journal *Medycyna*, No. 26, a series of cases, but no particulars are given in the present article.

ARTHUR COOPER.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. HALL.—A Case of Primary Perichondritis of the Larynx. (*Brit. Med. Jour.*, May 6, 1882.)

2. SCHIFFERS.—The Employment of Iodoform in Laryngeal Affections. (*Rev. Mens. de Laryngol.*, April 1882.)

3. BIRD.—The Treatment of Laryngeal Phthisis. (*New York Med. Record*, Jan. 14, 1882.)

4. LAWRENCE.—The Treatment of Diphtheria. (*Brit. Med. Jour.*, March 11, 1882.)

5. ATKINSON.—The Treatment of Diphtheria. (*Ibid.*, February 25, 1882.)

6. ALBERT.—Laryngeal Stenosis. (*Allg. Wien. Med. Zeit.*, No. 51, 1881.)

7. WHITE.—(Edema of the Vocal Cords secondary to Aneurism of the Ascending Arch of the Aorta. (*Ibid.*)

8. HALLEZ.—Subacute (Edema of the Epiglottis, and of the Epiglottidean Folds. (*Bull. Méd. du Nord*, Dec. 12, 1881.)

9. TORRANCE.—Chronic (Edema of the Epiglottis, causing great Difficulty of Deglutition, cured by Scarification. (*Brit. Med. Jour.*, Feb. 25, 1882.)

10. MOORE.—Ulceration of the Epiglottis in a Case of Typhoid Fever. (*Ibid.*, May 20, 1882)

11. KRISHABER.—Additional Remarks on Laryngotomy. (*La France Méd.*, April 4, 1882.)

12. HUTCHINSON.—On Calcified Bronchocele. (*Brit. Med. Jour.*, May 13, 1882.)

13. SEMON.—Two Cases of Laryngeal Growths, successfully removed by Endolaryngeal Operations, with the Aid of the Galvano-Cautistic Method. (*Ibid.*, May 27, 1882.)

14. HOLMES.—Thyrotomy for the Removal of a Foreign Body impacted in the Interior of the Thyroid Cartilage. (*Ibid.*)

15. DELAVAN.—Primary Epithelioma below the Vocal Cords. (*New York Med. Record*, Dec. 1881.)

16. DELAVAN.—A Case of Primary Epithelioma of the Tonsil. (*New York Med. Jour.*, April 1882.)

17. BISHOP.—The Treatment of Hypertrophy of the Tonsils. (*Brit. Med. Jour.*, Feb. 25, 1882.)

18. STUDDERT.—New Tonsil-Forceps. (*Id.*, Mar. 25, 1882.)

19. ALBERT.—Stenosis of the Pharynx in Tonsillar Angina. (*Allg. Wien. Med. Zeit.*, Nos. 1 and 2, 1882.)

20. COLIN.—Large Tumour on the Base of the Tongue menacing Life. (*Mens. de Laryngol.*, April 1882.)

21. HOBSON.—Case of Labio-Glossolaryngeal Paralysis. (*Brit. Med. Jour.*, April 29, 1882.)

22. PETIT.—Some Considerations on Nasopharyngeal Polypi and their Propagation in the Brain. (*Rev. Mens. de Laryngol.*, April 1882.)

23. DELAVAN.—Nine Cases of Tumour of the Nasal Septum Anteriorly. (*Archives of Laryngol.*, April 1882.)

1. *Hall on a Case of Primary Perichondritis of the Larynx.*—Dr. Hall read the notes of this case at the Clinical Society (*Brit. Med. Jour.*, May 6, 1882). He brought it forward, as there were none of the usual exciting causes of perichondritis present. He therefore concluded that it was an instance of primary perichondritis. There was no history of syphilis, typhoid, or typhus fever, no suspicion of phthisis, nor account of any injury. The patient was not cachectic, but well nourished. He had had a cough and hoarseness for some time, which had come on quite suddenly; after this, there was pain in swallowing and in the region of the thyroid; later, difficulty of breathing, expectoration of blood and pus, and paroxysms of severe dyspnoea. Tracheotomy was performed. After the operation, the epiglottis was found to be intact, but the glottis narrowed in all its diameters. After treatment, he somewhat improved, but was unable to dispense with the cannula. Recently, he had expectorated two portions of necrosed cartilage, and was still under treatment.

2. *Schiffers on the Employment of Iodoform in Laryngeal Affections.*—Dr. Schiffers (*Revue Mensuelle de Laryngol.*, April 1882) has for some time made use of pulverised iodoform in various tubercular affections of the larynx, always with good results. The powder adheres easily to the parts where it is applied, and forms a kind of coating after it has become mixed with the mucous secretion. It is best to dissolve it in ether, as in this way a larger quantity can be used at a time.

3. *Bird on the Treatment of Laryngeal Phthisis.*—Dr. Bird (*New York Med. Rec.*, Jan. 14, 1882) recommends inhalations of hydrastine with glycerine, borax, and morphia, in laryngeal phthisis.

8. *Hallez on Subacute (Edema of the Epiglottis and of the Epiglottidean Folds.*—A child, 20 months old (*Bull. Méd. du Nord*, No. 12, Dec. 1881; *Revue Mensuelle de Laryngol.*, April 1882), was suddenly seized with pain in the mouth and throat, and inability to swallow. Ten hours afterwards, an œdematous swelling of the anterior aspect of the epiglottis and of the epiglottidean folds was perceived. There was fever, but no respiratory trouble what-

ever. Dr. Hallez incised the swelling of the epiglottis, and applied a blister to the neck. Prostration became more and more pronounced, and the child died without any attack of suffocation or the least appearance of dyspnoea. No necropsy was made. The infiltration was oedematous and not sanguineous, and, after incision of the epiglottis, only a little serum, slightly sanguineous, came away.

10. *Moore on Ulceration of the Epiglottis in a case of Typhoid Fever.*—At a meeting of the Pathological Society (*Brit. Med. Jour.*, May 20, 1882), Dr. Norman Moore showed a case of ulceration of the epiglottis from a patient, aged 26 years, who had died of typhoid fever. The ulceration was at the upper edge, and was associated with a small local necrosis. The larynx was otherwise normal.

11. *Krishaber on Laryngotomy.*—Dr. Krishaber (*La France Méd.*, April 4, 1882), in answer to certain objections that have been made to this operation, sums up his remarks as follows. 1. Laryngotomy has the advantage over tracheotomy of extreme facility of execution, by reason of its two fixed landmarks—the pomum Adami and the cricoid cartilage—and the superficial situation of the crico-thyroid membrane. 2. A vertical incision suffices for introducing a cannula. 3. The operation may be performed by the bistoury or the thermo cautery, the latter being the best safeguard against hæmorrhage and the escape of blood into the trachea. 4. The cautery should be heated to a dull red heat. 5. The division of the tissues by its means should be made by successive puncturings, and not by scarification, so as to avoid resulting scars and secondary hæmorrhages when the latter come away. 6. The *cannula à bec* dispenses with the necessity of a dilator, which it would be almost impossible to use in the crico-thyroid space. The only critical moment when opening the trachea is thus avoided. 7. The indefinite presence of a cannula in the crico-thyroid space does not produce any alteration in the voice, nor any lesion of the laryngeal cartilages.

12. *Hutchinson on Calcified Bronchocele.*—Mr. Hutchinson showed at the Pathological Society (*Brit. Med. Jour.*, May 13, 1882) a patient who had a small sinus leading down to a calcified mass, evidently connected with the thyroid gland. The bronchocele had existed from childhood, and the calcification had occurred in middle life. Mr. Hutchinson had seen calcification of a bronchocele previously, but had not before had any experience of a calcifying tumour of this nature becoming necrosed.

13. *Semon on Two Cases of Laryngeal Growths in which the Neoplasms were Successfully Removed by Endolaryngeal Operations, with the aid of the Galvano-Cautic Method.*—The first case, shown at the Royal Medical and Chirurgical Society (*Ibid.*, May 23, 1882), was one of multiple sessile papillomata occurring in a lady aged 20. The symptoms were complete aphonia and slight dyspnoea on exertion. The growths were partly above and partly below the glottis. The former having been removed with forceps, the latter were destroyed by means of a suitably bent galvano-cautery introduced during full inspiration. The voice was restored, and no return had occurred four months after the operation. In the second case, a large hard broad-based fibroma occurred in a man aged 33 years, and had been growing for ten years. The growth nearly filled the aperture of the glottis, and was attached to the anterior commissure and right vocal cord. It was removed by means of the galvano-cautery loop, and the patient made a good recovery. Dr. Semon thinks that these

cases show that multiplicity, subglottic position, tendency to return, and large size of the growth, do not contraindicate, as thought by some, the intralaryngeal method.

14. *Holmes on Thyrotomy for the Removal of Foreign Body Impacted in the Interior of the Thyroid Cartilage.*—At the same meeting of the Royal Medical and Chirurgical Society as that at which the above cases of Dr. Semon were read (*Ibid.*), Mr. Holmes related the history of a case, in which a large and rough piece of bone was impacted in the neighbourhood of the left vocal cord for seven days before removal. Attempts to extract it with the laryngeal forceps having failed, laryngo-tracheotomy was performed on the fifth day; and as this also failed, the thyroid cartilage was split on the seventh day and the bone removed. The irritation of the foreign body set up inflammation of the mucous membrane of the larynx and trachea. This spread downwards, and the patient died nine weeks after the operation, of gangrenous abscess of the lung. Before death, the wound had nearly healed, and the voice had almost returned. Mr. Holmes, after discussing the subject of thyrotomy, drew the following conclusions. Very large substances may be impacted, either in the ventricle or between the alæ of the thyroid cartilage, without causing any symptoms of immediate urgency. 2. When such substances are rough or pointed, they sometimes give rise to a spreading inflammation of the mucous membrane, and in such cases should be removed as soon as possible. 3. If they can be seen and touched, they can usually be removed from the mouth either whole or piecemeal. 4. When this is found impossible without tracheotomy, an opening should be made through the crico-thyroid membrane and upper rings of the trachea; 5. After this operation, it is quite possible that the spasmodic contraction of the parts about the glottis may subside, and a renewed attempt at extraction be successful. 6. If this be impossible, the foreign body may perhaps be extracted or displaced from the tracheal wound, so that a preliminary tracheotomy is always advisable. 7. On the failure of such attempts, the thyroid cartilage is to be laid open in the middle line—partially from below upwards if the body is small, and can be felt lying near the wound—entirely and from above downwards if the body is large, firmly impacted, and lying out of reach from the tracheotomy wound. 8. The operation of thyrotomy involves little danger to life, and not much to the integrity of the voice; at least, the risk of damage to the vocal cords is much greater from the protracted irritation of the foreign body than from the operation.

15. *Delavan on Primary Epithelioma below the Vocal Cords.*—The author (*New York Med. Rec.*, Dec. 1881) records the case of a man, aged 54, without any history of syphilis, rheumatism, or alcoholic excess, who had for three years suffered from hoarseness, which had increased rapidly four months before admission, accompanied by pain in the throat and cough. On aryngoscopic examination, the mucous membrane was found swollen, especially the right ventricular band; the right side of the larynx was immovable during respiration; the left side moved in the normal manner. The trachea appeared healthy. Three days after this first examination, dyspnoea came on suddenly. Tracheotomy was performed, but the patient died six hours after the operation. On the *post mortem* examination, a nodular and rather hard tumour, about thirty-seven

millimètres in diameter, was found near the right vocal cord, and entirely covered by it, on a level with the lower part of the right ala of the thyroid cartilage. The abductor muscles were normal. The growth was found to have an epithelial structure. The author remarks upon the difficulty of making a right diagnosis in this case, as all the characteristic symptoms of cancer of the larynx were wanting. He believes death to have been due to bilateral paralysis of the posterior crico-arytenoid muscles, coming on suddenly from reflex causes.

16. *Delavan on a Case of Primary Epithelioma of the Tonsil.*—Dr. Delavan states (*New York Med. Jour.*, April 1882) that he has been able to find only three authentic cases of primary epithelioma of the tonsil, but thinks that their scarcity may be due to the confusion that has prevailed in the nomenclature of tumours. He appends a tabular statement of all the cases (42) of malignant tumour of the tonsil that he has been able to find after a careful search through the literature of the subject. The feature of greatest importance in Dr. Delavan's case, was the intense reflex pain in the ear of the affected side, which occurred long before any symptoms was discovered in the tonsil itself, and which completely misled the competent specialist who had had the case for several weeks under his direct observation. Four weeks after the appearance of the pain, an enlargement of the right tonsil was noticed, followed by ulceration of its surface and swelling below the jaw on this side. Pain and dysphagia increased. When the patient was examined, it was found that the left tonsil was entirely destroyed; the right tonsil was much enlarged and infiltrated, but its surface was still unbroken. The ulceration extended upwards towards the vault of the pharynx over the orifice of the Eustachian tube, and downwards to the base of the tongue and right border of the larynx. The right arytenoid, cartilage, false cord, etc., were also invaded, and their motion was distinctly impaired. No operation was attempted, and the patient died six months after the first appearance of the disease.

20. *Colin on a Case of a Large Tumour on the Base of the Tongue Menacing Life.*—The patient, aged 52 (*Revue Mens. de Laryngol.*, April 1882), had suffered for eight months from an affection of the throat. The last two months, the symptoms had increased so that he could not breathe when he lay down, nor could he swallow solid food. Hearing was also affected. On laryngoscopic examination, a tumour was discovered, apparently springing from the base of the tongue. Ineffectual attempts having been made to remove it with the *écraseur* and forceps, it was seized with the fingers and twisted off. The growth, presumably a papilloma, was of the size of a small mandarin orange, reddish-grey in colour, smooth on the surface, lobulated, soft and friable. It had apparently grown from a pedicle of the thickness of a finger.

22. *Petit on some Considerations on Naso-Pharyngeal Polypi and their Invasion of the Brain.*—Dr. Petit draws the following conclusions in an original work on the subject. 1. Naso-pharyngeal polypi have a marked tendency to invade the interior of the skull. 2. The diagnosis of the penetration of these tumours into the skull does not rest on any sure signs. 3. Certain tumours in the neighbourhood of the base of the skull have led to the belief that perforation of the base has occurred, without such being the case. 4. When invasion of the brain is feared, all operations must be abstained from until the tu-

mour hinders some important function, such as respiration or nutrition. 5. When once an operation is thought necessary, only those portions of the tumour should be removed that cause the functional trouble. Beyond this, palliative treatment only should be adopted.

12. *Delavan on Nine Cases of Tumour of the Nasal Septum Anteriorly.*—Judging from the scarcity of literature upon the subject, says Dr. Delavan (*Archives of Laryngol.*, vol. III, No. 2, April 1882), and the comparative rarity with which such cases are seen in clinical practice, tumours of the anterior nares are rare. That they do occur, and that their presence may be attended by such important, and even by such disastrous results as to make them worthy of especial consideration, is evident from the history of the following cases. Case 1. The patient was a boy, aged 16 years. The tumour occupied the right side of the septum, nearly opposite the middle turbinate bone, and entirely occluded the nostril. It was nodular, dull purple, moderately firm, and distinctly pedunculated. Hæmorrhage had been frequent and severe, but pain had at no time been great. The tumour was easily removed with the Jarvis's *écraseur*. It was apparently a lymphadenoma; in reality, it was a pure fibroma, the unusual proliferation of the lymphoid element being the result of the constant mechanical irritation to which the tumour was subjected. Case 2. The patient was a woman, aged 30, who had been subject to epistaxis since a child. The tumour, having a diameter at its base of three-quarters of an inch, and an apparent elevation of three-eighths of an inch, was situated at the junction of the septum with the ala, three-quarters of an inch from the meatus. It had grown slowly and without pain for two years, and there had been occasional epistaxis, sometimes severe and long-continued. It was red in colour, nodular, and bled at the slightest touch. The naso-pharyngeal mucous membrane was in a generally hyperæmic condition. The growth was removed by means of a cup-shaped curette. It instantly collapsed, so that the fragment that remained was too small to afford a satisfactory examination. It appeared to be a vascular myxoma. The resulting abrasion of the mucous membrane has never entirely healed. Case 3. The patient was a woman, aged 60. A large ovate tumour grew in the middle of the nasal cavity, almost occluding both nostrils. It was firm, indistinctly nodular, and bluish-grey in colour. It first made its appearance on the right side of the septum four years ago; then made its way through the septum, and appeared on the left side. It had caused neither pain nor epistaxis. It was attached by a pedicle to the anterior margin of the vomer, at its junction with the cartilage of the septum; what should have been the cartilaginous septum, was for the most part an extensive perforation, the septum having apparently receded before the tumour by the process of absorption. No further history of the case was obtainable, the patient not having again appeared. Case 4. The tumour, an enchondroma, projected from the septum of an infant, aged 8 months, and extended backwards as far as the anterior border of the vomer. It had been growing gradually for five months, coming on after a severe blow. In five cases treated by Professor Lefferts, the ages of the patient varied between 15 and 25, and the majority were females. The tumour was always located on the septum, on the right side in four, on the left in one, and well down towards the junction of the mucous membrane with the skin. The one symptom complained of, and the one which

alone, except in one instance, had attracted the patient's attention to the condition, was repeated epistaxis, sometimes difficult to check. In the one exceptional instance, the papillomatous tumour was so large as to block up the nares completely, and to appear at its external orifice. In the other cases, the size of the tumour was variable, but never exceeded a good-sized pea. All appeared to be papillary growths, but no microscopical examination was made. The treatment in all cases consisted in evulsion of the tumour, and cauterisation. In no case was there any recurrence.

W. J. WALSHAM.

OPHTHALMOLOGY.

RECENT PAPERS.

1. CHISHOLM.—Malignant Tumour of the Sphenoidal Cavities implicating Vision. (*Knapp's Archiv*, vol. xi.)
2. KNAPP.—Croup of the Conjunctiva. (*Ibid.*)
3. BETTMAN.—The Condition of the Eyes in Pernicious Anæmia. (*Ibid.*)
4. HOBBY.—Quinine Amaurosis. (*Ibid.*)
5. DERBY.—Hydrophthalmus treated by Iridectomy. (*Ibid.*)
6. HOTZ.—An Unusual Effect of Calomel on the Eye. (*Ibid.*)
7. HOLMES and PARK.—A Severe Injury of the Orbit. (*Ibid.*)
8. DUJARDIN.—On Albuminoid Exudation on the Cornea. (*Recueil d'Ophthal.*, April 1882.)
9. PARENT, H.—On the Reflection of Oblique Rays. (*Recueil d'Ophthal.*, April 1882.)

1. *Chisholm on Malignant Tumour of the Sphenoidal Cavities, implicating Vision.*—Dr. Chisholm records (*Knapp's Archives*, vol. xi, No 1) two interesting cases of tumour of the sphenoidal cavities, which have recently come under his observation. The first occurred in a boy, aged 7, and resulted in death within eighteen months. The second occurred in a man aged 37, and is still under observation. In the first case there was throughout a complete absence of pain. The earliest symptoms were nausea, vomiting, and headache; but these ceased after vision had become affected. In both cases the disease extended from right to left, and in neither was there any general paralysis, nor any evidence of extensive encroachment by the growth in the direction of the cranial cavity. The loss of smell was secondary to that of sight in the case of the boy, while in the elder patient it was retained even after the growth had invaded the left orbit. In the right eye it had been destroyed at a comparatively early period by pressure on the optic nerve. In the former case there was external squint with ptosis, in the latter internal squint followed by ptosis. In both cases the mind remained clear throughout; but in the second case the sufferings of the patient were excessive. In each case the growth could be felt by the finger, as an elastic mass within the orbit.

2. *Knapp on Croup of the Conjunctiva.*—Dr. H. Knapp of New York records two interesting cases of an unusually severe form of croupal conjunctivitis. (*Archives of Ophthal.*, vol. xi, No. 1). The consideration of these cases has induced him to reconsider his already published views on croupous inflammation of the conjunctiva, and to believe with

Arlt, Sämisch, and Wecker, that in some cases at least the affection must be considered as a distinct form of inflammation. The first case occurred in a boy nine years of age. Four weeks previously, he had caught ophthalmia in a public institution. When seen, the sight of one eye had already been destroyed, and that of the other was rapidly tending to extinction. On admission, the lids of both eyes were red, lustrous, swollen, and not particularly painful to the touch. The palpebral conjunctivæ were covered with thick coherent white membranes, which, when wiped away, left an uneven dark red bleeding surface. The cornea of the right eye was absent, and the place it should occupy was filled with a similar kind of membrane, which, however, could not be wiped off. The cornea of the left eye was intact, and the patient's general health good. Iced compresses were applied day and night, and the eyes cleansed every half-hour. Under this treatment the case remained materially unchanged for ten weeks, the membranes returning almost as quickly as they were removed. At the end of this period, however, there was a recrudescence of all the symptoms, the left cornea becoming infiltrated, the iris congested, the pupil immovable, and sight reduced to perception of light. Ice compresses and atropia were freely employed, and later on sulphate of copper. The right eye was lost, but the left recovered vision = 20-70. The second case occurred in a boy aged five years. Assuming at first the characters of the so-called proliferating form of mucopurulent conjunctivitis, thick tough membranes were later formed, but readily cast off. Treatment by escharotics and astringents failed, and eventually the right cornea was completely destroyed. The other eye was saved. Dr. Knapp considers that these cases go far to establish the specific character of croupous inflammation as distinguished from diphtheritic, to which it is most nearly allied. It differs from catarrh, blennorrhœa, and trachoma by the presence of the characteristic white membranes, and from diphtheria in the following respects. 1. In diphtheria the lids are stiff and hard, and can with difficulty be everted. In croup they are soft and supple, and can be easily everted. 2. The diphtheritic lid is unusually hot and painful; the croupous lid can be handled without causing much pain. 3. The diphtheritic exudations are interstitial, the croupous superficial. 4. The diphtheritic exudatum cannot be readily removed, but must be torn off, leaving the subjacent tissue pale and ragged; the croupous membrane can be wiped off as a whole, leaving the subjacent tissue dark red, bleeding, and uneven. 5. The tissue of the diphtheritic lid when cut into is anæmic; the croupous is highly congested. 6. The diphtheritic lid tends to mortification; the croupous to proliferation or polypoid excrescences. 7. Diphtheria readily extends from the lids to the bulbar conjunctiva; croup is limited to the lids, only attacking the cornea in the severest cases, but always avoiding the scleral conjunctiva. Dr. Knapp considers that the great point in treatment is the avoidance of all irritant medication, so long as the formation of the pseudo-membranes is still active. Uninterrupted application day and night of iced compresses to the lids, and the careful washing away of the secretion with a soft sponge, while the inflammation is progressing, is of the utmost importance. In the acute stage, the essence of treatment should be the abstinence from all but indifferent local remedies, methodical and uninterrupted application of cold, and careful cleansing. In the stage of decline the same

treatment in a milder form; in torpid and protracted cases, astringents or mild caustics. The treatment with ice compresses is often very successful in chronic cases of trachoma, where the cornea has apparently become hopelessly dimmed.

3. *Bettman on the Condition of the Eyes in Pernicious Anæmia.*—Dr. Boerne Bettman (Knapp's *Archiv.*, vol. xi, i) had recently an opportunity of examining under peculiarly satisfactory conditions the eyes of two patients in whom pernicious anæmia had proved fatal. The ophthalmoscopic appearances observed during life resolved themselves generally into paleness of the papillæ and fundus, a cloudiness of the retina, diminishing in intensity towards the periphery, and a loss of the characteristic appearances of the veins and arteries, together with the presence of white spots not unlike what is seen in albuminuric retinitis. Microscopically, the most interesting changes observed in the retina were (1) rupture of the membrana limitans interna; and (2) the presence of numerous clusters of varicose nerve-fibres. As to the explanation of the latter phenomenon, the author in the main agrees with that given by Roth, viz., that it is due to transudation, either of serum or lymph, producing swelling of the nerve-fibres. As to the rupture of the internal limiting membrane, Dr. Bettman thinks it was probably due to the attacks of vomiting, which in each of his cases preceded death.

4. *Hobby on Quinine Amaurosis.*—Dr. Hobby records (Knapp's *Archiv.*, vol. xi, No. 1) a case of quinine amaurosis, which occurred in consequence of the administration of large doses (20 grains) of the alkaloid in malarial neuralgia. On the fourth day after taking the medicine, the patient's vision fell to 16-200 in the right and 3-200 in the left eye. The pupils were widely dilated, both retinæ were profoundly anæmic, and the visual fields were reduced to about 1-10th their normal size. Treatment consisted in the injection hypodermically of strychnine, and a ferruginous tonic. The improvement was rapid, and within ten days sight rose to 16-20, while the visual field of each eye had doubled. The affection showed itself first of all in the left eye, in which the pupil was dilated and insensible to light, for some time before the right eye showed any symptoms whatever.

5. *Derby on Hydrophthalmus treated by Iridectomy.*—Dr. Haskett Derby draws attention (Knapp's *Archiv.*, vol. xi) to the extreme rarity of hydrophthalmus as a disease, and the very meagre reports of the results of treatment which ophthalmic literature gives. He records three cases in which iridectomy had been performed as a curative measure, and in which he had been able to watch the results during a series of years. The first case occurred in a woman aged 20. Vision had been impaired since the age of eight. The case was a typical one of hydrophthalmus (the right eye being the worse of the two, and admitting only of quantitative perception of light; T + 2). Iridectomy was performed in 1865, with the result that vision improved after the operation until 2½ years ago, since which it had been steadily failing. The second case occurred in a man aged 22, of whose eight brothers and sisters four have hydrophthalmus, two being wholly blind. In the patient's case the disease had increased since birth, the right eye being the more affected. In 1864 an iridectomy was performed; but in 1866 the condition of the eye had not materially changed. Dr. Derby performed iridectomy in that year in the left eye, at which time vision was = 1-22, and was

steadily failing. The patient was seen sixteen years afterwards. The eyes were then unchanged in appearance, but vision was still failing, though extremely slowly. He is now 38 years of age, and sees the motion of a hand at 10 feet. The other members of his family became blind at 17 years of age. The patient believes the operation arrested the progress of the disease. The third case occurred in a man aged 20. Of eleven members of his family four are blind; vision generally commencing to fail about the age of 14. Vision in each eye was 1-10; fields of vision were contracted. There was arterial pulse and glaucomatous excavation of the disc. Iridectomy was performed in 1870. Vision fell off immediately after the operation, but returned in full shortly afterwards. In 1872 it had fallen to 14-200 in each eye, and did not vary afterwards. The patient was seen in 1881; the visual field retained its previous limits, and the disease appeared to be definitely arrested. The author considers that in this affection iridectomy offers the best chance of preserving what is left of vision, or of spreading it over a great number of years. He therefore feels justified in recommending it as a method of treatment in these cases, in opposition to the opinions of some ophthalmologists. The operation is of course a difficult one, and the risk of hæmorrhage is considerable, but the curative effects are worth this risk.

6. *Hotz on an Unusual Effect of Calomel on the Eye.*—Dr. Hotz of Chicago records an interesting case (Knapp's *Archives*, vol. xi, No. 1), illustrating the caustic effects which calomel occasionally produces when applied to the cornea and conjunctiva. The patient was aged 38, and had never suffered from any specific disease. When first seen, the eyelids were red and swollen, the conjunctivæ roughened by enlarged papillæ and intensely chemosed. There was a large white crescent on the lower half of the ocular conjunctiva, its convex border reaching down to the lower retrotarsal fold. The transparency of the cornea was not affected, but the iris was discoloured, and the pupil bound down by synechiæ. The history of the case showed that the patient had suffered from acute iritis, for which, by an error in diagnosis, calomel had been applied locally. It had evidently acted as a caustic, which, as the patient had not been taking iodide of potassium, is a somewhat remarkable and rare occurrence. The sample of calomel when analysed was found to contain a large amount of free hydrochloric acid. Dr. Hotz remarks that at the temperature of the body the chloride of sodium in the tears can readily, in the presence of a minute trace of hydrochloric acid, change the subchloride into a perchloride, thereby producing caustic effects, a reaction which should be borne in mind.

7. *Holmes and Park on a Severe Injury of the Orbit.*—Drs. Holmes and Park record an unusually severe case of injury of the orbit, occurring in a boy aged 14 (Knapp's *Archives*, vol. xi, No. 1). The injury was caused by a splinter of wood penetrating the orbit. When first seen, the ocular symptoms consisted of small fistulous openings in the lower lid, diminished tension of the globe, considerable loss of vision, with tenderness and swelling of one side of the face, and impeded movements of the jaw. An exploratory incision along the border of the orbit demonstrated the presence of a foreign body, passing probably into the antrum. The antrum was therefore laid open by a preliminary operation; but, owing to the weak condition of the boy, and the

very copious hæmorrhage, the operation had to be abandoned. A second operation was undertaken some months later, and consisted in removing with chisel, saw, and forceps the inner half of the malar bone, and almost all the floor of the orbit. On removing still more of the outer wall and floor of the orbit, a foreign body was found and extracted with a strong pair of forceps. It was a piece of pine $2\frac{1}{2}$ inches long, and half an inch square at its base. It had been lying with its anterior extremity engaged on a level below the infra-orbital ridge, and on the external surface of the orbit. Its posterior extremity was engaged just in front of the maxillary articulation. In its course it had penetrated the infero-exterior wall of the orbit, having lodged with one end in the orbit, and the other in the zygomatic fossa, and lying at the same time across the outer extremity of the speno-maxillary fissure. A drainage-tube was inserted, and the wound subsequently healed satisfactorily. Vision was reduced to fingers at 5 feet, and the whole region supplied by the infra-orbital nerve was entirely anæsthetic.

8. *Dujardin on Albuminoid Exudation on the Cornea.*—Under the above designation, Dr. Dujardin treats (*Recueil d'Ophthal.*, April 1882) of certain exudations, presumably albuminoid, which take place on the surface of the cornea after the application of heated substances. They are, in all the cases in which he has met them, due to burns with metal, never with caustics. He records five such cases, in which burns on the cornea had been followed by a white opacity, lasting only from twelve hours to two days. Such scars can often be removed by simply pressing the lids over them. They are important chiefly from a prognostic point of view, being in reality much less severe than their aspect would lead the observer to suppose.

9. *Parent on the Reflection of Oblique Rays.*—Dr. Parent (*Recueil d'Ophthal.*, April) has attempted to measure by means of keratotomy the amount of astigmatism caused by the oblique incidence of rays of light in emmetropic eyes. He places the person to be examined at a distance of 1.5 mètres (nearly 5 feet), and observes the eye at angles successively of 15 deg., 30 deg., 45 deg., and 60 deg.; in the latter case the pupil being necessarily dilated with atropine. Then, by his proceeding of keratotomy, the refraction in the vertical, horizontal, or other meridian is noted and corrected by a suitable cylindrical glass, care being taken to place the glass perpendicular, not to the optic axis of the eye observed, but to the incident rays proceeding from the reflecting mirror. As the result of examination, after this method of an emmetropic eye, he found that for an angle of 30 deg. the vertical meridian remained practically emmetropic; from an angle of 45 deg. the astigmatism became mixed. He concludes as follows. 1. In the eye, as in lenses generally, oblique rays give rise to astigmatism. 2. This astigmatism for given angles of incidence is less for the eye than for a lens. 3. This astigmatism increases with the angle of incidence, and assumes the form of mixed astigmatism, with the peculiarity that the ametropia is more considerable in the myopic meridian than in the hypermetropic.

LITTON FORBES.

REVIEWS.

Sarcoma and Carcinoma: their Pathology, Diagnosis, and Treatment. By HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon and Demonstrator of Surgery and of Diseases of the Throat, St. Bartholomew's Hospital; lately Erasmus Wilson Professor of Pathology, Royal College of Surgeons. With four lithographic plates. London: J. and A. Churchill. 1882.

DURING the past two years, the author of this work has delivered the series of lectures on which it is founded at the Royal College of Surgeons; hence Mr. Butlin's method of dealing with his subject is already known to the medical public. For many years, as the reports of several societies amply prove, he has devoted much time to the study of malignant diseases, and this work is the result of his prolonged labours in that direction, and not a mere ambitious compilation. It cannot be denied that many young beginners have commenced life by writing a book, and sometimes a very good book and have continued their career in the independent and original study of the subject of their treatise which, of necessity, must have been a compilation. The power of expressing a doctrine that the learned cannot teach often exists among those who are relatively ignorant, and a fresh young mind frequently theorises with success over material patiently collected by an older worker. The book now subjected to our notice is a product of another principle, the fruit of personal observation of details, and independent analysis of pathological and not literary material.

Pathology, according to Mr. Butlin, always signifies morbid anatomy combined with critical comparisons of different morbid growths and processes. Theory is practically absent from his writings. Several contemporary pathologists, with as good outward and visible claims to authority, have enunciated very advanced theories on malignant disease; but not one word do we hear about the remarkable opinions of Creighton, Cripps, Thin, and others. Dr. S. W. Gross's name is certainly to be found in the pages of this work; but Mr. Butlin makes use of that name, reduced to what a mathematician would call his own terms, that is to say, not in reference to what epithelium can or cannot do, but in relation to the possibility of cancer of the testis in children. The key-note to the author's opinions on all existing theories is struck on page 12, where we are told that a vast series of trustworthy clinical and microscopical accounts of tumours must be first collected, in the manner which the author indicates throughout his work, before the general laws of malignancy may 'haply be discovered'. The author characteristically adds, 'but in the meanwhile a fair history may be obtained of the sarcomas and carcinomas of each individual region of the body'. He clearly prefers getting a 'fair history' to seeing a law settled or 'discovered'. He resembles Voltaire's inhabitant of Sirius, who loved to argue details of philosophy with another intelligent being called man, but, when solicited for his ideas on *le bout des choses*, presented to man a book of blank pages. It would spoil the sublime scientific task of searching through original materials, if a theory were found that would settle everything. Like the fox-hunter, the scientist is never over-eager to catch his game too soon, and thus to stop the exciting chase in which he delights. Pathologists like

Mr. Butlin have ever two things in their favour—firstly, they are working on what from most points of view are the soundest scientific principles; secondly, their subject, being infinite, can never be really settled by a theory.

As Mr. Butlin lays all stress on description, and insists on the great importance of the anatomical situation of a new growth, it must here be remarked that we only find malignant diseases of the testis, bones, tongue, œsophagus, and tonsil, discussed in these pages, or, rather, described, since our author does not 'discuss,' on principle. It is impossible to review each individual chapter in our limited columns, as its entire point lies in the consideration of every line of descriptive pathology which it contains.

In the chapter on the testis, the comparative descriptions of sarcoma and carcinoma of that gland are most valuable, as are the author's remarks on the relation of enchondroma of the testicle to malignant disease. The sections on sarcoma of bone are very interesting, and, as not one word is said about primary cancer in that tissue, we must conclude that our author holds the prevalent modern opinion on the subject.

Probably the most valuable portion of the work is the chapter on sarcoma and carcinoma of the tongue. Mr. Butlin points out that the diagnosis of cancer from syphilitic ulceration in the earliest stages, when most good could be done, is never very easy, if the surgeon rely on inspection, touch, and the patient's history alone. The universal practice is to try for a few weeks the effect of antisyphilitic remedies, and certainly very foul ulcers sometimes disappear under such treatment; but when the sore happens to be cancerous, the objection to such a proceeding is obvious. Our author strongly recommends the microscopical examination of scrapings from incipient ulcers. He alleges that he has discovered important changes in the epithelium scraped off an ulcer which is malignant. The squamous epithelium removed from a syphilitic or tuberculous ulcer is well formed, the cells are of equal size, not granular, and with very small nuclei. But epithelial cells scraped from an incipient cancerous ulcer vary considerably in shape and size, their nuclei are much larger than those of normal cells, and sometimes there are several nuclei, or even nucleated cells within the larger cells, while granular material always occupies their interior. Cell-nests have not unfrequently been observed in these scrapings. These distinctions are well indicated in a plate.

In a chapter on malignant disease of the œsophagus, Mr. Butlin speaks very gloomily about treatment. 'Other than resection, no operation holds out the least likelihood of cure.' Œsophagotomy 'is very seldom applicable,' nor does gastrostomy at present offer a much better prospect of relief, except by the almost certain hope which it affords of a quickly fatal issue.' Still the author has great belief in resection, in the few cases where it is practicable.

There are many similar observations on the diagnosis and treatment of malignant disease which appear for the first time in this work, not being included in the lectures. Consistently with the principles encouraged by its author, we hope and expect to see much more work on malignant disease of other parts from Mr. Butlin. The breast and ovary are not included in this treatise; and we look forward to the results of minute investigations of cases of cancerous degeneration, as seen in old ulcers and perineal fistulæ. But we may have to wait many years

for such further information, since our author relies entirely on patient investigation; and previous experience of the study of tumours in one part is not likely to induce him to hurry through his labours in the examination of malignant growths in other structures. Still, when we get such additional information, we may count on its value and trustworthiness.

ALBAN DORAN.

The Pharmacopœia of the London Hospital. Compiled under the direction of a Committee appointed by the London Hospital Medical Council. London: J. and A. Churchill. 1882.

THE *Pharmacopœia* of the London Hospital having been for some time out of print, the Medical Council deemed it advisable that the whole matter should undergo thorough revision, and appointed a committee, consisting of certain members of the medical staff, to undertake the work. It is a matter for regret that the names of these gentlemen do not appear, so that we might know to whom we are indebted for having so ably and conscientiously carried out this arduous undertaking. To edit or compile a work of this description is no light task. The new *Pharmacopœia* of the London Hospital is not a puny work of thirty pages or thereabouts; but a bulky volume, as large as many a standard text-book. If it fulfilled no other function, it would, at all events, serve forcibly to illustrate the shortcomings of the *British Pharmacopœia*. It may serve too, as a stimulus to the authorities of some of the other hospitals, who should stir their latent energies, and endeavour to improve their own productions.

The first part of the work before us is devoted to *materia medica*, and consists of a list of drugs, with the preparations into the composition of which they respectively enter. In some cases an attempt has been made to define the drug. Thus, we are told that Picrotoxine, is the active principle of *coccu indicus*. It does not appear, however, that it enters into the composition of any of the preparations, nor is the dose mentioned in the Posological Table. In a work of this description we should have expected to find at least a picrotoxine pill or mixture. In the second part the preparations are arranged in alphabetical order, and we have a goodly list of *aque, balnea, capsulæ, cataplasmata, collutoria (nasal douches), collyria, confectiones, decocta, emplastra, enemata, gossypia medicata, injectiones*—both for urethra and vagina—*lintea medicata, pessarea, pigmenta, suppositoria*, and so on. The formulæ have evidently been selected with great care, and many of them are entirely new, at all events in a Hospital *Pharmacopœia*. We see that only two kinds of capsules are made official—sandal wood oil and phosphorus. Many object to these preparations on the score of expense; but it is impossible to do without them, and we would be glad to see the list augmented by the addition of *apiol* and some others. Under the head of *enemata*, directions are given for the preparation of various forms of nutritive injections, and a special section is devoted to the subject of peptonised food. We are glad to note the introduction of a *Mistura Sanguinis Exsiccata*, or Mixture of Desiccated Defibrinated Bullock's Blood. The *pigmentum chloralocamphoratum*, made by rubbing together equal parts of hydrate of chloral and camphor, till liquefaction ensues, is an useful local application for neuralgia and other painful affections. Almost the only serious fault in the work is the difficulty experienced in

finding a drug when its mode of administration is not known. Take, for example, the case of apomorphia, which is of much value as an emetic in cases of poisoning. It is not even mentioned in the *Materia Medica* list. We learn nothing from the Posological Table, except that the dose is a tenth of a grain; and it is only after a long search that we find it under the head of drugs 'kept in the form of discs'. There are ten solutions for hypodermic use, including even curara; but apomorphia is unaccountably omitted. We are greatly surprised that the committee prefer the expensive nitro-glycerine lozenges to the cheaper and more convenient one per cent. alcoholic solution. Nitro-glycerine, again, is not mentioned in the *Materia Medica* list; and we are not told how the lozenges are made, the basis even not being mentioned. It is well known that many cases of angina pectoris require large doses of nitro-glycerine many times a day; and for these unfortunate sufferers lozenges containing only one-hundredth of a grain in each are quite useless. The appendix contains a number of lists and tables, which will prove of the greatest value to students. Minute directions are given for case-taking, for the estimation of urea according to Dupré's method, of sugar, etc., whilst there are many formulæ of solutions for preserving and obtaining animal substances. Taking it on the whole, we have no hesitation in saying that it is by far the best Hospital Pharmacopœia that has yet appeared.

W. MURRELL, M.D.

Elements of Pharmacy, Materia Medica, and Therapeutics. By WILLIAM WHITLA, M.D., Gold Medallist, Queen's University, Ireland; Licentiate of the Royal College of Physicians and Surgeons, Edinburgh; Physician to the Ulster Hospital for Sick Children, etc. London: Renshaw. 1882.

The difficulty of writing a good text-book of materia medica and therapeutics has long been recognised. Dr. Whitla, departing from the usual custom, endeavours, in a small work of five hundred pages, to give an account of the elements of pharmacy, materia medica, therapeutics, and the art of prescribing. That the information on any of these subjects can be thorough or exhaustive, is obviously impossible, but the author has done his best to accomplish a difficult task. The first part, devoted to Pharmacy, is well and carefully done, and indicates a knowledge of practical dispensing, which, unfortunately, is becoming day by day more and more rare. We have tested practically the accuracy of many of the author's statements, and find that they are in the main reliable. The directions for making pills, spreading plasters, and compounding ointments and suppositories, are excellent, the descriptions being supplemented by an admirable series of illustrations. Under the head of *Materia Medica*, the drugs are arranged in alphabetical order, with their preparations. In many cases, there are appended to the descriptions short practical notes, which will be found of much value to those preparing for examinations. The sections on Therapeutics and the Physiological Action of Drugs are, of necessity, brief, but the information is precise and to the point. There are, however, statements to which exception might fairly be taken; the directions for the treatment of cases of poisoning being, in many instances, erroneous or incomplete. Thus, under the head of Aconite, the author says:—'Various antidotes have

been recommended, such as charcoal, digitalis, etc., but experience says nothing in their favour.' This may be true, but it does not justify the omission of all mention of atropia as an antidote to aconite, or of the use of nitrite of amyl in these cases. It is stated that, in large doses, tobacco produces contraction of the pupil, but no indication is given that this is a point on which there is great diversity of opinion, most writers maintaining that tobacco follows the rules of the atropacæ, and dilates the pupil, especially if given in large doses. Probably, the most unsatisfactory portion of the work is that devoted to the non-official remedies. The whole subject is dismissed in seven or eight pages, and the information is meagre in the extreme. It must not be supposed, because we call attention to the blemishes in the work, that we are condemning it as a whole. On the contrary, the work has been well and carefully done, and reflects much credit on the author. The subjects have been thoroughly studied, and Dr. Whitla undoubtedly possesses exceptional powers of putting together in a condensed form, a vast amount of information on points which are universally recognised as being amongst the most difficult in the whole of the medical curriculum. The lessons on prescription-writing are by far the best we have seen, and these alone would serve to make the work popular with students.

W. MURRELL, M.D.

The Surgery of Deformities. By E. NOBLE SMITH, F.R.C.S., Surgeon to the Farringdon Dispensary. London: Smith, Elder and Co. 1882.

THIS is a sound practical guide to the treatment of bodily deformities, based evidently upon personal observation and experience. Although it is more specially the reflection of the author's own practice, it by no means lacks anything noteworthy or valuable in the practice of other surgeons.

Mr. Noble Smith has carefully collected and criticised the various standard works and monographs which have appeared on orthopædic surgery in this and other countries. The subjects of caries of the spine and hip-joint disease are treated in quite a fresh and original manner. The chapter on knock-knee is full of new ideas and suggestions for treatment, and we are glad to see that the treatment of this condition by osteotomy meets with but very qualified praise from the author. The section on the nature of deformities gives a succinct notion of what the deformities are which have come in course of time to be classed under the heading of 'orthopædic deformities'. Mr. Noble Smith discusses at some length the causes which give rise to deformities, more especially congenital abnormalities.

The work contains an interesting chapter by Dr. Sturge on the causes of abnormal muscular contractions arising from nerve-lesions. In the chapter on club-foot, Mr. Noble Smith has followed the teaching of Mr. W. Adams, which is well known.

An excellent account of displaced semilunar cartilages of the knee and the mode of their reduction is given. The description of the treatment of lateral curvature of the spine is clear, precise, and convincing. The author is strongly in favour of constitutional treatment in all such cases where practicable. He does not, however, wholly discard the use of all spinal supports, but condemns the old-fashioned apparatus which interfere with muscular action. The apparatus used by Mr. Noble Smith can be adapted by the surgeon himself, and does not require the continual

interference of the instrument maker, which is such an unfortunate characteristic of some instruments.

We can cordially recommend the work as a guide to busy practitioners, who will find in it just what they want clearly set forth and illustrated. The illustrations are thoroughly practical and easily understood. The work amply sustains the sound reputation already acquired by the author.

Transactions of the Clinical Society of London.
Vol. xiv. London: Longmans, Green and Co. 1881.

THIS volume, somewhat smaller than the preceding one, is not inferior to it in merit. It contains forty-seven communications, as against sixty in that of the year before. It is always a matter of difficulty to single out cases from a miscellaneous collection such as this, and where each is recorded for some point or points of special interest in the circle of which it forms part, and which it helps to illuminate. It may, however, be noted that four communications upon myxœdema are to be found therein; a case of progressive painful inflammation of arteries; three cases of cerebral disease of pointed bearing upon the function of the third frontal convolution—one in which a tumour, occupying the third right frontal, caused aphasia, the patient being left-handed; a second, in which disease in the third left frontal of a left-handed man did not cause aphasia; the third, in a child, left-handed by compulsion, his right being paralysed from birth. In this case, although there was recent softening and destruction of Broca's convolution, the speech was not affected.

We must not omit to mention a very valuable communication with which the volume closes, viz., the report of the committee on excision of the hip-joint. The report was intended to have especial reference to the indications for resorting to the operation, the results obtained from the operation as to mortality and the after-condition of the limb, the method of operating, and the nature of the disease. The conclusions are of great interest, and, when it is added that the committee was composed of Messrs. Macnamara, Bryant, Croft, Holmes, Hulke, Marsh, and Lyell, we need hardly add that it is of great practical value.

JAMES F. GOODHART.

Ringworm: Its Diagnosis and Treatment. By ALDER SMITH, M.B. Lond., F.R.C.S. Second edition. London: H. K. Lewis. 1882.

THIS little book has deservedly reached a second edition in a comparatively short time. It is written by a practical man for practical men, and gives an excellent account of the various conditions produced by the growth of trichophyton tonsurans, in the hairs of the scalp. The author, from his position as resident medical officer at Christ's Hospital, has had unusual opportunities, not only of seeing many cases of ringworm (they are common enough), but of closely watching the effects of various methods of treatment. The results of his experience are fully and clearly described in his book. Mr. Smith relies largely, in treating this disease, on an ointment containing carbolic acid, citrine ointment, and sulphur ointment in various proportions; on oleate of mercury, in strengths of 5, 7½, and even 10 per cent. according to the age of the patient; and, in certain obstinate cases, on the treatment by croton oil, first suggested, we believe, in France. Mr. Smith's

volume is an useful contribution to practical medicine.

G. THIN, M.D.

Manual of Pathological Histology. By CORNIL and RANVIER. Second Edition. Re-edited and enlarged. Translated, with the approval of the authors, by A. M. HART. London: Smith, Elder, and Co., 1882.

THERE is no department of medicine which has made more rapid strides within the last few years than pathology, chiefly owing to the advances made in normal histology, normal physiology, and experimental pathology. Considering the paucity of treatises on this subject in the English language, the authorised translation of Cornil and Ranvier's well-known text-book by Mrs. Ernest Hart will be welcomed alike by students, practitioners, and teachers of medicine. We need say little in praise of the original work; it has occupied the first rank amongst the text-books ever since the appearance of its first edition. We find it freely quoted, not only in our English systematic treatises on medicine and surgery but also in those of Continental writers. Written in a clear, lucid, and succinct style, and comprehensive in its scope, avoiding speculative theories, and containing, above all, a vast amount of new and original matter, it has always been one of the most reliable books for reference. Utilising the vast material which had come under their notice, the authors have on most subjects been able to give the results of their own investigations, and were not satisfied with merely restating the observations of others. They have, however, not underrated the researches of other investigators, and, as the result, we possess in their treatise an admirable exposition of all that is known respecting the morbid histology of the tissues and organs of the human body.

A portion of the first edition (which appeared in three parts) having been written thirteen years ago, the authors felt compelled, in view of the many advances made in recent years, to write a second edition of the entire treatise. This second edition will appear in two volumes, the first of which has only just been published, and of this Mrs. Hart presents us with an excellent translation. This first volume treats in its first part of general pathological anatomy, and in its second part of the lesions of tissues.

One would have liked in the first part to have seen some mention of the recent researches on the intranuclear network, on hyaline degeneration, as described by Recklinghausen and his pupils, and on Weigert's coagulation-necrosis. The classification of tumours also is one which, perhaps, will not commend itself to English pathologists, the authors making the classification a purely anatomical one and thus grouping the carcinomata with the fibrous tumours, and separating them altogether from the epitheliomata and adenomata. These omissions are however, insignificant when compared with the many additions and new facts contained in this edition. Some of them, as, for instance, the description of the numeration of blood-corpuscles, are very useful to the clinical observer, as well as to the student of pathology.

In the second part of the first volume, the chapters treating on the lesions of bones, cartilage, and joints, which already in the first edition formed by far the best account given in any text-book on this subject, have been augmented so as to keep abreast of the advance of science; as, for instance, the paragraph on syphilitic bone-lesions. The chapter on

the pathological histology of the blood contains a brief *résumé* of the changes found in the blood in the different diseases; the part treating on the parasites of the blood might, however, we think, have been extended with profit, so as to include some more of the recent researches on micro-organisms, especially as no separate chapter is devoted to their consideration, unless the authors intend to include this in the second volume.

The last two chapters of the book treat of the pathological changes found in lesions of the brain and spinal cord; and here, again, we find several valuable additions. The bibliographical references have also been considerably increased, and brought down to the recent time.

As for the English translation, the highest praises are due to Mrs. Hart for the manner in which she has done the by no means easy task. The translation, besides being perfectly correct, and following closely the original, yet runs so smoothly that the reader will often think he is perusing an original treatise. In several points the English edition surpasses the French; thus, the translator has re-paragraphed the book, headed each paragraph with letters in Egyptian type, and added some useful notes and a complete index of contents.

The illustrations, so useful a part in such a treatise, are from the same blocks and of the same excellence as in the original French edition.

Cornil and Ranvier, in its improved English dress, is thus sure to take its place amongst the first and best text-books on pathological anatomy; and we should be glad to see it in the hands of all medical students, and of all those who wish to keep themselves informed of the present state of pathology.

We now hope to see soon the second volume, which will treat of the pathological histology of the several organs, and which Mrs. Hart promises us as soon as it is published in France.

J. DRESCHFELD.

NEW INVENTIONS.

A NEW ELECTRO-MASSAGE INSTRUMENT.

It has occurred to Dr. John Butler, of New York, that the disadvantages and discomforts of electro-massage would be materially lessened if it were possible to combine the two methods of procedure—*Massage* (manipulation, or friction by the hands, on the limbs and joints), with electricity; and in watching the manipulator at his work, he conceived the idea that if the mechanical motion used in rubbing the patient could be made to generate an electrical current, which could be transmitted through the affected part while it was being manipulated, the requirements of the case would be met. Following out this idea, he succeeded in devising the instrument which is here illustrated and described.

The instrument, as will be perceived by consulting the accompanying cut, consists of a metallic roller, covered with chamois leather or other suitable material; an electro-magnet; and a permanent magnet, set in a strong frame, which holds the apparatus together. The roller acts as one of the electrodes, and is likewise the driving portion of the apparatus, communicating its motion through connecting gearing to the electro-magnet, causing it to

revolve its poles opposite to those of the permanent magnet. The rounded portion of the latter, which is flared for greater convenience, forms the handle by which the instrument is moved over the surface of the patient's body. The proportions of the gearing are such that each revolution of the roller causes the electro-magnet to make twenty-five revolutions. The current thus induced is interrupted at each



revolution by a break-piece. The instrument gives a current sufficiently strong for all purposes for which it is intended to be used. To complete the circuit, a flexible metallic disk, or other suitable electrode, is connected by the binding post, the roller acting as the other electrode. Both electrodes are brought into contact with the body of the patient, and as the moistened roller is moved about with gentle or vigorous pressure, as the case may require, over the surface, the current is established and transmitted through the part over which the roller is caused to revolve.

This instrument combines at once the properties of a generator of electricity and of a kneading, rubbing or manipulating device. It is exceedingly simple, inexpensive and not liable to get out of order. Its operation, likewise, is so simple and obvious, that any person will understand how to use it after a few simple directions from the physician. As the current is generated by the inductive effect of the permanent magnet, the battery, with its acids or other liquids, is dispensed with, the instrument is always ready for use when required, and is very compact and portable.

Dr. Butler, who has devised this ingenious apparatus, affirms that the results from its use have exceeded his expectations. Its employment is very convenient; it fulfils most of the requirements of the induction current in general practice, and gives greater tonic effects than can be obtained from the old procedure of using manipulation and electricity separately.

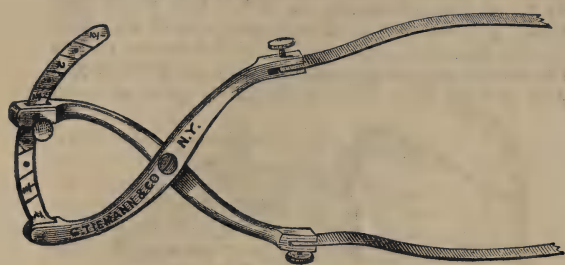
The manufacturers of this instrument are the Dynamo-Electric Manufacturing Co., of 907 Broadway, New York city.

A NEW CYRTOMETER.

The accompanying cut represents a cyrtometer, made for Dr. Theo. A. Weed of Cleveland, Ohio, by Messrs. Tiemann and Co., of New York, which he has used with very much satisfaction.

The instrument consists of two arms, each $2\frac{1}{2}$ inches long, joined together by a screw, after the scissors pattern, holding narrow strips of aluminium long enough to completely encircle the chest. To the distal ends of the arms is attached an indicator, which may be set at any point on the scale. The manner of using the instrument is as follows. Set the indicator at any given point, by means of the thumb-screw; place the strips tightly around the chest, and mould them to fit exactly the various depressions and elevations; loosen the thumb-screw on the indicator; open the scissor-arms, and remove

the instrument without displacing the strips; place the indicator in its former position, and lay the instrument on a large sheet of paper; trace carefully



all the curves of the strips with a lead-pencil, and the result will be an accurate outline of the chest-wall. Now, if the instrument be reversed, end for end, upon the paper, the position and character of the difference between the two sides of the chest will become apparent. It is unnecessary to discuss the many different diseases of the lungs in which a knowledge of existing elevations or depressions of a localised part of the chest-wall is of paramount importance to the physician.

The instrument, with shorter strips, will be found very useful in many of the local deformities which are found in the practice of every physician.

A NEW DILATOR FOR STRICTURE OF THE OESOPHAGUS AND NEW SPECULUM VAGINÆ.



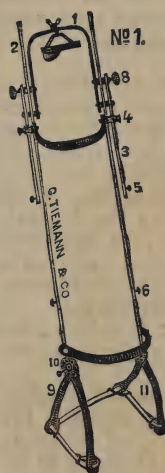
DR. I. L. CRAWCOUR, formerly Professor of Medicine in the New Orleans School of Medicine, writes in the *New York Medical Record* of August 6, 1881: 'Some time ago I was called to a case of stricture of the oesophagus. A child, eight years of age, had accidentally swallowed some condensed lye. Four months had elapsed since the accident, and nothing had been done. When I saw the child, it had not been able to swallow anything for three days. The smallest oesophageal sound would not pass, a small gum catheter or bougie bent against the obstruction, and one with the stylet would not take the proper curve. In this dilemma I bethought me of Otis' flexible urethral probe; this, the smallest (a No. 8 French scale), passed, but with great difficulty; after some few days, I passed Emmet's uterine probe, which is somewhat larger, and in this way was enabled gradually to dilate the stricture. The child meanwhile was fed by enemata. The stricture was gradually dilated by means of ivory bulbs attached to a flat metallic wire. It struck me that a series of flexible bougies, made on the spiral wire system, would be useful, not only in such cases, but also as urethral dilators; and I asked Messrs. Tiemann and Co. if they could make me some. It was a question whether they could be made of sufficient size, and yet retain their elasticity. Messrs. Tiemann have made me a set of four, which are admirable and answer every purpose.

'They are fifteen inches long, and, as

will be seen by the cut, have a broad flat handle. They terminate in an acorn-shaped bulb, and are as follows; No. 1. Bulb No. 15, French gauge, attached to a short and narrow neck, rapidly increasing to No. 17; No. 2. Bulb 17, shank 19; No. 3. Bulb 19, shank 21; No. 4. Bulb 21, shank 24.

'These are the sizes which, I think, will be found in practice most useful, and, thanks to the skill and patience of Messrs. Tiemann, they are perfectly flexible.'

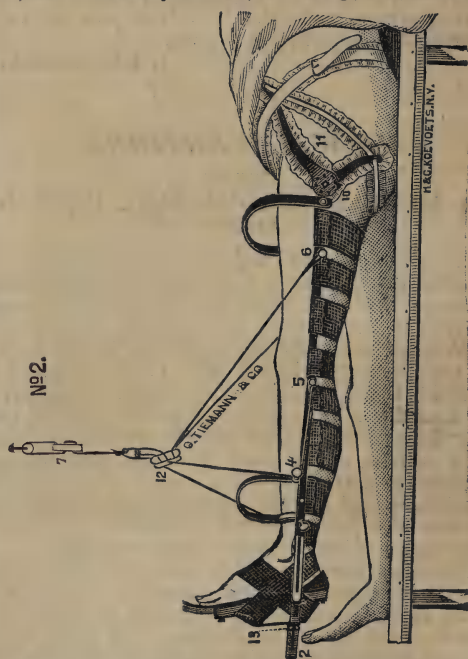
GENERAL LOWER EXTREMITY SPLINT.



In the *Atlanta Med. Rec.* for November 1881, Dr. Clendinen describes a splint which he has devised for extension and counter-extension, by weight of limb, with capacity for fixation. It consists of two side irons, which can be conveniently lengthened to accord with the length of limb of the patient. It can be suspended by cords and pulleys to the ceiling. A continuation, which can either be fixed or allowed to move by free joints (10, Fig. 1), attaches the splint to the pelvis, and, by adjustment of a rubber 'bearing', 'the line of counter-extension can effect inversion or eversion of the limb'. The footpiece is so arranged that 'the foot may be raised or lowered, and the limb inverted or everted.

The footpiece can be extended upon the framework, and fixed in any desired position by set screws.'

'The pelvic bearings, in effecting counter-extension, are of self-adjustment, do not gall, and by the



open angles circulation cannot be interfered with. By means of this splint, it appears that extension can be carried out while the limb is suspended in a sling.

E. NOBLE SMITH.

NEW-SHAPED POCKET-CASE.

Messrs. Arnold, of West Smithfield, have designed an improved pocket-case, the advantages of which over the old form of case will readily suggest themselves. It is made curved, so that it adapts itself to the contour of the body, and can be carried in the breast-pocket without bulging. The contents are arranged in an exceedingly small space. Whilst containing the full complement of instruments usually found in an ordinary three-fold case, its dimensions are only $5\frac{3}{4} \times 4\frac{1}{4} \times 1$ inches.

The case contains: exploring trocar and cannula, Syme's and Paget's abscess-knife, scalpel and finger-knife, sharp and probe-pointed bistoury, electroplated spatula, bow dressing or polypus forceps, torsion forceps, dressing scissors, spring dressing forceps, silver male and female catheter united,



silver caustic-case with palladium spring holder, gum lancet, bleeding lancet, silver director, two silver probes, and half a dozen needles. In addition to the above, it is provided with an ivory tablet for pencil notes.

A NEW EUSTACHIAN CATHETER.

Dr. Samuel Sexton of New York offers an Eustachian catheter, the introduction of which into the guttural orifice of the Eustachian tube is less painful than those made of either metal or vulcanite. He

writes:—Flexible instruments have been devised, as is well known, but none have possessed sufficient merit to retain a permanent place in the aurist's armamentarium. So far as is known to me, M. Deleau was the first to recommend a flexible catheter, the description of which may be found in his *Traité du Cathétérisme de la Trompe d'Eustache*,

etc., p. 115; Paris, 1838. But the pain caused in withdrawing the stilette of Deleau's instrument led to its abandonment. It occurred to the writer that a catheter made of soft India-rubber, but sufficiently firm to retain the necessary curvature of the beak, could be used without a stilette, thus overcoming the principal objection to its adoption.

A catheter of this kind is shown in the wood-cut. The part A, is a cannula of German silver, nickel-plated; it is eight and a half centimètres in length and about one-half of a centimètre in diameter. The soft rubber portion, C, is eleven and a half centimètres in length. The cut is about one-half the size of the instrument. The metallic portion affords a firm handle for holding the instrument during its introduction and for subsequent manipulations.

Owing to the softness of its pharyngeal end, the catheter may have a much greater curvature than one of inflexible material, thus permitting its secure lodgment in the mouth of the Eustachian tube, when the necessary manipulations of the surgeon have brought it into position.

In cases of lateral deviation of the nasal septum, with closure of one side, I have succeeded in introducing the catheter into either Eustachian tube while the instrument remained in the unobstructed meatus. I may here state that the smooth and soft finish of the rubber used by the maker of the instrument will allow of very free movements being made in the nasal meatus and vault of the pharynx without giving rise to irritation of these sensitive parts.

Several sizes of the rubber portion of the instrument may be employed, but I have as yet required only two in my own experience, one of them being five and the other seven millimètres in diameter. The thickness of the rubber is one millimètre. The beak is more tapering than is shown in the cut. The cannula is tapering where it enters the flexible portion; in attaching the two parts, the ring guide of the cannula should correspond with the concavity of the curved beak. When the operator finds that the beak has engaged in the mouth of the Eustachian tube, as indicated by the diagnostic tube, it may be more firmly secured in its place by gentle inward pressure. From some months' experience in using this catheter, I believe it to possess the following advantages over other instruments. It enables the surgeon to more easily perform the operation of Eustachian catheterism. It is less painful to the patient. It admits of greater cleanliness; each patient may retain possession of the soft rubber portion of the instrument which has been used in his case. The instrument is made by G. Tiemann & Co. of New York.

Since writing the above, Dr. Sexton recalls the fact that an English surgeon, Cleland, introduced a flexible Eustachian catheter in 1731.



DIETETIC NOVELTIES.

MESSRS. BRAND AND CO.'S ESSENCE OF MALT.

The different extracts of malt are of such inestimable value in the treatment of wasting diseases, and all disorders of the digestive apparatus, that the appearance of a new preparation by a well-known firm will be hailed with pleasure. The essence of malt, made by Messrs. Brand and Co. of Mayfair, is one of the latest candidates for public favour. It is made by what is called the Dence and Mason process, and is guaranteed to consist solely of the essence or soluble portion of pure English malt, without admixture of any kind. We have given it a careful trial, and are satisfied that it is a reliable preparation. It is taken both by children and adults without the slightest difficulty, and patients always prefer it to cod-liver oil.

CONROY'S MALT COFFEE.

The special peculiarity of this coffee is that the malt which has been added to it makes a larger proportion of the extractives contained in the coffee soluble; and soluble in such a form that they are readily digestible. It amounts, in fact, to bringing into solution in an easily available form the nutritive principles and the alkaloids contained in the coffee, so that, instead of being left in the 'grounds', *i.e.*, the insoluble matter, and wasted, they are valuable as forming part of a beverage. This result is obtained by a correct use of malt, which extracts matters from the coffee which would not otherwise be brought into solution. As a coffee, this is a more valuable article than any we have recently examined, but the difficulty which occurs to us in connection with it is, whether it will be allowed to pass into consumption under the new, and as it seems to us absurd, regulations proposed in the new Inland Revenue Act. This is a matter which should be taken up more strongly than it has heretofore been by the makers themselves. Malt coffee certainly does not stand on the same basis as coffee adulterated with chicory. The makers of this preparation are Messrs. Evans, Son, and Co., Hanover Street, Liverpool, and it is to be had retail of chemists and grocers.

MISCELLANY.

MISS E. A. ORMEROD, F.M.S., consulting entomologist to the Royal Agricultural Society, has been appointed special lecturer on Economic Entomology at the Royal Agricultural College, Cirencester.

A COLLEGE FOR MEDICAL PRACTITIONERS has been inaugurated at St. Louis, to teach medical practitioners, by practical instruction, the special branches of medicine and surgery. There will be twelve departments, so arranged that special courses may be taken with as little loss of time as possible. The following gentlemen have been elected to fill a part of the departments: Thos. F. Rumbold, M.D.; Ewd. Borck, M.D.; W. Hutson Ford, M.D.; Wm. Dickinson, M.D.; W. B. Outten, M.D.; Col. Fred. T. Ledergerber, Attorney-at-Law; C. H. Hughes, M.D.; and other gentlemen who also have had especial advantages in their departments will be added. Particulars may be had of the Dean, Dr. Thos. F. Rumbold, 1225, Washington Avenue; or of the Secretary, Dr. Ewd. Borck, N. E. Corner of Fourth and Markets Streets, St. Louis, Mo.

A NEW APPARATUS FOR TAKING TRACINGS.—M. D'Arsonval has invented an apparatus for taking tracings at a distance free from rubbing. The smoke, or soot, is stored in an India-rubber bag, or produced by a current of air issuing from a gasometer, or a bag full of gas. Tinder, or the leaves of certain plants, answer equally well; likewise the smoke of a lamp, or a smoky candle. The registering stylus is hollow, and the smoke passes along the rotatory axis. In another kind, the stylus moves along with the tracing-paper, and the jet of smoke is stationary. M. D'Arsonval made a communication to the Biological Society, in which he says that the instrument can be varied in numberless ways.

GERMAN PREPARATIONS OF IRON.—Dr. Walton states that there are three preparations of iron widely used in Germany, which are very valuable, both as regards their therapeutical effects, their palatability, and their tolerance by the digestive organs. They are probably procurable at any of the German druggists in England, and are entitled: 1. 'Ferrum Oxydatum Saccharatum Solubile', or *Eisen Zucker*, given in the form either of powder or syrup. 2. 'Tinctura Ferri Pomata', a weaker and pleasant preparation, suitable for children. 3. *Pyrophosphorsäures Eisen*, which is soda-water containing the pyrophosphate of iron in clear solution, and drunk at dinner. Another form extensively used is the 'Syrupus Ferri Pyrophosphorici cum Ammonio Citrico', formerly known as 'Syrupus Napoleonis', from its having been taken by Napoleon III. It is a very pleasant preparation, but not to be compared with the *Eisen Zucker*.—*Med. Times and Gaz.*

INDIAN CORN.—The report of the commission appointed by the Academy of Science, to examine the memoir by M. Fua, on the 'Hygienic Properties of Indian Corn,' states that this cereal is not only a most healthy article of food, but it repairs waste, and the use of it cannot be too widely diffused. It is only dangerous when badly preserved, and if attacked by smut or blight. M. Fua has devoted several to the endeavour to popularise the use of Indian corn as an article of food, and also its cultivation. M. Fua received the thanks and approbation of the Academy for his memoir.

A FEMALE AMBULANCE ASSOCIATION.—L'Union des femmes de France, which was founded last year for the purpose of aiding the sick and wounded in time of war, and suffers from national misfortune, has recently held its first general meeting. Mme. Koechlin-Schwartz was in the chair. The Union is in a prosperous state, and consists of 1,024 members. Its dépôt is well stored, and all ambulance appliances will be plentifully supplied when wanted. The Union has organised a school, where 250 women learn how to attend and nurse the sick and wounded, and at which Professors of the Paris Medical Faculty lecture. Thirty-six diplomas have been granted. Mmes. Gouren-Boisvert, Milly, Juilly and Dideo, have taken prizes.

THE KOLA NUT.—M. Chatvis has brought before the Académie des Sciences, on behalf of Herren Heekel and Schlagdenhauffen, a few particulars as to the 'gourou', or Kola nut, the fruit of the *Sterculia acuminata*. It serves the same purpose in Equatorial Africa as the maté or coca in America, being used as a tonic by the negroes. Travellers report it to have the effect of making the worst water fresh and agreeable, which renders it invaluable in a country where water is scarce and the sun scorching. This property would appear to be due to the presence of tannic acid and a bitter principle, caffeine, and theobromine, combined with a certain sweetness due to glucose.

ERRATUM.—In our notice of the Alupikos Boot, in the April number of the LONDON MEDICAL RECORD, we described the maker as Mr. Thomas Parker, 175, Oxford Street. It should have been 145, Oxford Street.

The London Medical Record.

ON THE PHYSIOLOGICAL ACTION AND THERAPEUTIC USES OF JAMAICA DOGWOOD (*PISCIDIA ERYTHRINA*).*

THE *piscidia erythrina*, *erythrina piscipula*, Jamaica dogwood, or fish-catching coral tree, belongs to the natural order Leguminosæ. It is a native of the West Indies, growing chiefly in arid districts on the mountains of the Antilles. It occurs in great abundance in Jamaica. When full grown, it attains a height of from twenty to twenty-five feet. It has a bright coloured smooth bark, and very irregular spreading branches. The leaves are twice or thrice pinnatifid, somewhat coriaceous, covered with a fine down when young, afterwards becoming glabrous. The part used in medicine is the bark. It is usually met with in commerce in pieces about three inches wide, slightly curved from side to side, and about an eighth of an inch in thickness. It is of a light brown colour, with a slight greenish tinge. The epidermis is covered with flattened protuberances resembling warts, of a lighter colour than the base. When broken, it emits a strong disagreeable odour, not unlike propylamine.

The first mention of *piscidia* as a medicinal agent occurs in an article by Dr. Barham of Jamaica in the *Hortus Americanus*, published in 1794. Dr. Hamilton of Plymouth published, in the *Pharm. Jour.* of August 1844, a short account of its properties. He had noticed, when resident in the West Indies, the use of the bark of the root by the natives for catching fish, on which, even when of large size, it exerted a very powerful effect. Subsequent writers described the process in detail. Thus, in Loudon's *Encyclopædia of Plants*, published in 1872, it is stated that the bark is pounded up and mixed with the water in some deep and convenient part of a river or creek, whence it may spread. In a few minutes, the fish lying under the rocks or banks rise to the surface, where they float as if dead. The large ones recover after a time, but the smaller fry are destroyed. The eel is not intoxicated by any ordinary dose, though it is evidently affected very sensibly, for the moment the particles spread where it lies, it moves off with great agility. Fish caught in this way are eaten without hesitation, and are not considered unwholesome. Other authorities state that the bark, after being detached from the roots, is mashed up with what is called 'temperlime' and the low wines, or lees of the still-house, the mixture being placed in small baskets, from which it is gradually washed out by persons holding them in the water from boats slowly rowed up the river. Dr. Hamilton was induced to try *piscidia* as an anodyne in toothache, and found that a saturated tincture was very efficacious, not only affording relief when taken internally, but curing the pain when applied locally on lint. The formula he employed in the preparation of the tincture was to macerate an ounce of the bark in coarse powder in four fluid ounces of rectified spirit for twenty-four hours, and then to filter, the dose being a fluid drachm. His first observations were made on him-

self when suffering from a violent attack of toothache. He took a teaspoonful of the tincture in cold water at bed-time. He immediately felt a violent sensation of heat internally, which rapidly spread all over the body, and was followed by profuse perspiration. He slept profoundly for twenty-four hours, and in the morning awoke refreshed and free from pain.

The chemical composition of *piscidia* has not as yet been thoroughly investigated, nor has its active principle been isolated.

The physiological action of the drug has been investigated both on rabbits and frogs by Dr. Ott of Philadelphia, but it is difficult, from a perusal of his paper, to ascertain his conclusions. It would appear, however, that he considers—1. That it does not affect the motor nerves; 2. That it reduces reflex action by stimulating Setschenow's centres; 3. That 'it produces a tetanoid state by a stimulant action on the spinal cord, and not by a paralysis of Setschenow's centres'; 4. That 'it increases arterial tension by stimulation of the monarchical vaso-motor centre'; and 5. That this increase of pressure is succeeded by a fall due to a weakening of the heart itself. He states, too, that it dilates the pupil, is a salivator, and increases the secretion of the skin. He adds that 'its surface is pleasure and its depth death'.

The only preparation in use at present is a fluid extract made of the usual strength of the fluid extracts of the *U.S. Pharmacopœia*, each minim representing a grain of the drug. The dose is from half a drachm to two drachms.

It would appear that *piscidia* has been largely used of late in America, and very satisfactory results are recorded. It affords most relief in facial neuralgia; but it has been given with success in the treatment of obstinate sciatica, chronic rheumatism, and other painful affections. In cases of simple insomnia, it is said to be a valuable remedy.

WILLIAM MURRELL, M.D.

SCHUSTER ON THE EXCRETION OF MERCURY DURING AND AFTER THE USE OF MERCURIALS.

DR. SCHUSTER of Aix-la-Chapelle publishes some interesting investigations, made under his direct observation, upon this subject. Experiments of other observers, viz., Vajda and Paschkis in Vienna, and afterwards Oberländer, have gone to show that mercury may be found in the urine of the majority of cases undergoing mercurial treatment, and especially treatment by inunction. These observers also claim to have discovered the presence of mercury, not only two, three, or six months after the suspension of the treatment, but even after as long as two, five, and twelve years. The method employed consisted of three processes: 1. Separation of the mercury from the fluid containing it by means of some metal (zinc or copper) in a state of extremely fine division, forming an amalgam; 2. Driving off the mercury from this amalgam by means of heat; 3. Conversion of the mercuric vapour into the easily recognisable mercuric iodide. Dr. Schuster now points out that the metal used to form the amalgam has hitherto been the ordinary zinc-dust (zinkstaub*)

* A secondary product in the manufacture of the pure metal. It consists of minute particles of metallic zinc, more or less oxidised, and, at the same time, small quantities of the other metals named, and of cadmium.

of commerce, which contains, besides arsenic and antimony, an alloy of certain other metals. Each of these he submitted to the iodide test, and, in the cases of antimony and arsenic, obtained results which might easily be mistaken for indications of the presence of mercury. To avoid the possibility of this error, he caused a series of experiments to be made, using a preparation of copper and zinc, known as 'lametta', which is free from the admixture of other metals. The experiments were carried out by an experienced analytical chemist, and in a few cases the fæces, as well as the urine, were examined for the presence of mercury. Forty-one cases are recorded which had been under some form of mercurial treatment, in many cases by inunction of ointment, or of mercuric soap, and, in a few, by injection of mercuric cyanide. In some cases, opportunity was given for examination of the urine after long intervals.

The results obtained were as follows. Of fifty-two analyses of urine, thirty-two gave negative and twenty positive results. Of the positive cases, mercury was never found in the urine earlier than from the seventh to the twelfth day after the beginning of the treatment. Ten of the positive results were obtained during the treatment, and ten within three weeks after it. Of the thirty-two negative results, fourteen were obtained during long continued treatment, and eighteen after it. In no single case was any positive result obtained after the sixth month from the suspension of the treatment.

In several of the cases, the fæces as well as the urine were examined, and, without exception, more abundant evidence of the presence of mercury was obtained in them than in the urine; but in the cases investigated one year after the cessation of the treatment, no positive result could be obtained in either.

Although his opportunities of examining the fæces were only few in comparison with the urinary examinations, Dr. Schuster lays stress upon this fact, that, in all the experiments upon fæces, the expected results were obtained; whereas, in the case of the urine, many of the experiments ended in a directly negative result, even in cases where the physiological effects of the mercury were manifest in the patient at the very time when the examined urine was excreted.

He sums up the results of his inquiries thus. 'During mercurial treatment, the mercury appears very soon in the fæces, often to a considerable amount; and this excretion appears to be fairly constant, and lasts even for weeks after the cessation of the treatment. After one year, however, no trace of it appears. The excretion of mercury may take place also in the urine, but, even during the treatment, it is not constant, and may last after its cessation, irregularly, for a long period. It cannot be traced after six months. The retention of mercury in the system for years is, therefore, highly improbable.'

The method employed in the examination of the fæces consisted in deodorising by stirring with bromine, then evaporating to consistence of a thick syrup. This was then treated with a mixture of concentrated nitric and hydrochloric acids (1 to 3), and evaporated over a water-bath until no further smell of acid could be perceived. The residue was then digested in hot water and filtered, the filtrate being tested in the same manner as the urine.

E. CLIFFORD BEALE, M.B.

HUSEMANN ON THE SIGNIFICANCE OF THE PTOMAINES IN TOXICOLOGICAL CHEMISTRY.

TH. HUSEMANN contributes a valuable article on this subject (*Archiv der Pharm.* No. xvi, 1881, p. 415). The formation of ptomaines being frequent in corpses when undergoing slow decomposition, it might be presumed that they would be frequently observed in the bodies of persons who have died from acute arsenical poisoning. Selmi has succeeded in demonstrating that, under these circumstances, peculiar arsenical poisonous bases (arsines) are formed. In 1878 he reported two cases in which poisonous crystalline ptomaines were found in exhumed bodies containing arsenic. The first subject was the body of a person exhumed fourteen days after burial, in a good state of preservation, and containing much arsenic. In the search for alkaloids, a small quantity of an alkaline substance, having a sharp bitter taste, was found. It was crystallisable, yielded crystalline salts, reacted generally as an alkaloid, but gave no precipitate with platinic chloride. It afforded, also, several colour reactions; but the amount of material did not suffice for a complete chemical and physiological examination. Shortly afterwards, Selmi obtained larger quantities of a more easily crystallisable ptomaine from an arsenical corpse exhumed a month after death. This base was alkaline in reaction, and had likewise a sharp bitter taste. Its chemical reactions differed somewhat from those of the previously described alkaloid. It was highly poisonous when administered to a frog. An endeavour to destroy the base, by means of nitro-hydrochloric acid, and then to demonstrate the presence of arsenic, led to no definite result, though several milligrammes of the base were employed for the purpose.

Though in these two ptomaines the presence of arsenic was not proved, Selmi afterwards discovered organic arsenical bases (arsines) in the stomach of a pig which had been preserved in a solution of arsenic. The tissues were not destroyed, and there was no putrescent odour perceptible. The alkaline liquid yielded, on distillation in an atmosphere of hydrogen, an alkaline distillate, which yielded white crystals, with hydrochloric acid. These, when moistened with caustic soda, exhaled an odour somewhat resembling that of trimethylamine. The presence of arsenic was ascertained in the hydrochlorate of this volatile base, which yielded some alkaloidal reactions. Experiments made with 24 milligrammes (0.36 grain) of the substance showed it to be highly poisonous, and that it resembled strychnine in its physiological action.

From the solid matter, a volatile alkaloid was further extracted, but its small quantity prevented an accurate examination from being made. From the residue of the distillation of the ether used in extracting these bases, a third and non-volatile base was obtained, having an alkaline reaction, and of a cadaverous odour. On exposure to air, this base became brown, and insoluble in water. Its hydrochloric solution had an offensive odour and a bitter taste. It caused tingling when placed on the tongue, followed by loss of sensibility. The base yielded alkaloidal reactions, and contained arsenic. It was poisonous to frogs, but its action differed from that of the volatile arsine, and was somewhat similar to that observed as the ordinary action of the poisonous ptomaines. Torpor, paralysis, and stoppage of

the heart in systole, were the most prominent symptoms.

The alleged existence of arsenical ptomaines is highly important, not only to the medical jurist, but as affording a possible explanation of chronic arsenical poisoning produced by arsenical wall-papers. If Selmi be correct in his assertion, that a volatile arsine is produced by the contact of arsenious acid and albuminous substances, possessing a highly poisonous action differing from that of arsenious acid, Husemann thinks it likely that a similar product may be formed from the size employed in affixing the arsenical paper to a room, the moisture of the air playing a part in the formation of the arsine. The writer of this notice is not aware, however, that symptoms resembling strychnine intoxication have been observed as the result of living in rooms covered with arsenical paper.

Selmi's researches may, as Husemann thinks, throw light upon an obscure page in the history of toxicology. It is asserted that the poisoners of the seventeenth and eighteenth centuries, Toffa and other professionals, understood how to render arsenic more potent. In Italy, the *acquetta di Perugia* was, according to tradition, a secret compound prepared by rubbing white arsenic into the flesh of a pig, and collecting the liquid which dripped from the flesh. The liquid, prepared in this way, was thought to be much more poisonous than a simple arsenical solution. It is possible that the activity of the arsenic was increased both by the formation of readily absorbable compounds of arsenic with the inorganic alkalies, and by the formation of arsenical bases. The same object may have been in view in preparing *acqua Toffana* with the addition, as is known, of the juice of the ivy-leaved broad flax (*linaria cymbalaria*). Selmi and Vella are of opinion that, in the *acquetta di Perugia*, the concealment of the action of the arsenic, on the one hand, and also of the tetanising poisons on the other, was accomplished; but this opinion, which is based upon an observation of Vella, in a case of poisoning with arsenic and strychnine, does not accord with observations made on warm-blooded animals with a mixture of potassium arsenite and strychnine, whereby the tetanising action of strychnine was not prevented, provided the alkaloid was given in poisonous doses.

THOMAS STEVENSON, M.D.

LUKENS ON OMPHALITIS AND ITS COMPLICATIONS.

DR. ANNA LUKENS, Resident Physician to the Country Branch of the Nursery and Child's Hospital, Staten Island, treats of omphalitis of the new-born, in a paper published in the June number of the *New York Med. Jour. and Obstet. Rev.* After giving an illustrative case, she remarks that the disease is of rare occurrence, but that it is said to occur even during foetal life, by the movements of the child causing traction upon an unusually short cord, or one that is wound around the body of the foetus.

As described by Hennig, there are four varieties. 1. In the mild form, the navel is prominent, the surrounding skin is reddened, the abdomen is distended, and, when the abdominal walls are thin, the vein can be felt as a cord extending from the liver to the umbilicus. 2. In the second, or severe form, the navel is infiltrated, and surrounded by a reddish-blue circle. Erysipelas frequently occurs, and extends over the abdomen and the lower extremities. There is

greater distension of the abdomen, even when peritonitis does not occur, than in the mild form. The urine is sometimes bloody or icteric. The stools are greenish or bloody. Movements of the inflamed navel are painful, and may cause convulsions or trismus. Recovery is rare in the severe cases, but may occur after the disease has continued two or three weeks. 3. The third variety is the croupous or diphtheritic. The peritoneum behind is usually involved in the inflammation, and frequently the contiguous coil of intestine. 4. The fourth variety consists of an inflammation of the tissues surrounding the umbilical vessels within the abdominal cavity, and often accompanies puerperal disease. It is usually limited to the vicinity of the navel, but may extend along the course of the umbilical vein to the capsule of Glisson. Early in the disease the umbilical vessels are not affected, but they subsequently participate in the inflammation, and necrosis may occur from compression by the shrinking exudation. The peritoneum is at first only locally injected; afterwards a yellowish infiltration separates it from the posterior wall of the umbilical fossa.

Omphalitis may occur primarily, or secondarily to other diseases. It is attributed sometimes to anomalies in the closure of the navel, to rough handling, to uncleanness, to impure air, or to puerperal infection. Peritonitis and thrombosis of the umbilical vessels, with subsequent phlebitis and arteritis, are frequent complications. Umbilical hæmorrhage, icterus, and pyæmia may also occur. Umbilical phlebitis may be produced by purulent matter entering the vessels from the fossa of the umbilicus, also by traction on the cord, or tight bandages; or it may be secondary to omphalitis when non-involution of the umbilical vein exists. Thrombosis sometimes has an intra-uterine origin. Inflammation of the umbilicus, and especially of the outer walls of the umbilical vessels, is an important factor in causing non-involution. Besides other causes, thrombosis may also be due to defective nutrition of the vascular walls themselves, arising from a general septic poisoning, causing pyæmia or septicæmia. Whereas, on the one hand, thrombosis may occur from septic absorption, so, on the other, there may be general septic poisoning after involution of the vessels, when no thrombosis can occur. The infection may be limited by thrombosis *in situ* of the umbilical vein, just as the uterine lymphatic glands may sometimes limit the diffusion of poison in puerperal infection.

The principal danger in thrombosis of the umbilical vessels is the softening and breaking up of the coagulum, with the formation of distant emboli. As the umbilical vein is, of all the blood-vessels peculiar to foetal life, the first to undergo involution, and is even at birth sometimes found considerably contracted, softened clots can rarely be admitted to the venous blood through the ductus venosus. Even an embolus in the liver is an exceptional occurrence. A coagulum at the entrance of the umbilical vein into the portal vein has been frequently observed, but is believed to be a local thrombosis, and not an embolus. Thrombosis, sometimes, though rarely, extends from the umbilical vein into branches of the portal vein.

In regard to the pathological anatomy of umbilical phlebitis, the vein frequently presents a hard cord-like feeling, the walls being thickened, and often unevenly dilated. The contents may consist of simple disintegrated coagula, or of uniform laudable pus. Sometimes the pus column is separated by cheesy masses. Occasionally a pseudo-membrane is found

lining the vein. The intima and middle coat finally dissolve into a mass of white blood-corpuscles. The liver is sometimes, though rarely, affected. Bednar once found, in umbilical phlebitis, the hepatic vein inflamed, and nearly all its branches filled with pus, which, on section of the liver, flowed out in great quantities. Emboli in the hepatic branches of the portal vein have not been clearly demonstrated. When inflammation of the connective tissue around the umbilical vein extends to the capsule of Glisson, the latter becomes swollen and infiltrated. The inflammation may extend to the hepatic parenchyma, and by compression of the bile-ducts produce mechanical icterus, which assumes, however, the malignant form.

The symptoms of phlebitis are a cyanotic or icteric hue of the surface. Pemphigus-vesicles and hæmorrhagic abscesses are frequent. Gangrene, especially over the sacrum and of the navel, may occur. The purulent contents of the vein can sometimes be pressed out through the umbilical fossa. The umbilicus becomes prominent and indurated. The cord may have fallen, or be still adherent. The inflamed vein can sometimes be felt through the abdominal wall. Next to peritonitis, meningitis is the most frequent complication. Peritonitis may be circumscribed or general. The peritoneal fold surrounding the umbilical vein is often the starting-point of the inflammation. Phlebitis is often only recognised after the appearance of purulent infection. It occurs between the first and twenty-eighth days, most frequently on the seventh. The fatal termination may be either from general septic poisoning, from peritonitis, from embolic infarction and metastatic abscesses, or from thrombosis in important vascular territories. Inflammation of the umbilical arteries may be confined to the seat of the coagulum, the remaining portion of the vessel being contracted, or even closed. The coats of the vessels become swollen and gradually disintegrate, and finally perforation occurs. The adventitia is the seat of the principal changes, which readily extend to the surrounding tissue. Arteritis may occur after the umbilicus is almost or entirely healed, and the latter may afterwards begin to protrude, inflame, and supurate. Pus can sometimes be pressed out by making pressure upward from the bladder. At times there is retention of urine, with painful micturition and sensitiveness in the region of the bladder. Icterus and peritonitis may occur, but belong more particularly to phlebitis. The contrast between arteritis and phlebitis is striking. Arteritis is rarely accompanied by fever, icterus, or pyæmia, and is almost always cured. Phlebitis has all the above-mentioned complications, and is almost always fatal. Arteritis is rarely a cause of general infection, but pyæmia may occur by purulent matter from the arteries being taken up from the umbilical fossa by the vein. This occurs more easily when the navel has been closed, or healed over; or infectious material could pass, in the opposite direction, into the pelvic blood-vessels, and from these into the general circulation. The neighbouring lymph-vessels can also take up molecular detritus, and carry it into the circulation. Thrombosis of the ductus Botalli has been observed in arteritis, but oftener in phlebitis.

HIRSCHFELDER ON TETANY.

TETANY presents many features of interest, not the least being the comparative rarity of its occurrence. Its exact nature is still matter of discussion, and

well-recorded instances possess value. One explanation of the affection refers it to the class of spinal irritations, but its distinctive phenomena give it an individuality of its own. Dr. Hirschfelder communicates some particulars of the disease in the February number of the *Pacific Med. and Surg. Jour.*, founded on observations of a case which had come under his care in private practice. The patient was a man of nervous temperament, who had nevertheless enjoyed good health until February 1880, when he fell with an elevator, sliding down a trap a distance of three stories, and lacerating the palms and fingers of both hands, but especially of the left. No unusual symptoms occurred during the next five days, except slight convulsive movement at night, to which no attention was paid; a severe convulsion, however, set in on the evening of the fifth day, and, being regarded as tetanus, was treated with bromide of potassium. Morphia given subcutaneously only made matters worse; chloral finally checked the condition. Two weeks later, a second attack was again met with chloral, and a depressed nervous state persisted after it. Another severe convulsion occurred shortly before Christmas, chloral again conquering it; but a decayed tooth having been blamed for the mischief, it was extracted. Fresh attacks, apparently causeless, came on in June 1881, since which time the patient has continued nervous and excitable. Dr. Hirschfelder describes the obvious appearances as follows.

'You see, gentlemen, the patient before you looks to be in the best of health, and no one would suspect him to be a victim of the disease present. I press upon the radial nerve, and you see contraction occurring in the palmar muscles supplied. I squeeze the ulnar nerve—the muscles on the ulnar side draw up. I press upon the axillary nerves rather forcibly, and you see the patient stiffens, the arms draw up, the head turns back, opisthotonos and a well-marked tetaniform convulsion ensue. At the same time, the face reddens, and you hear a short hacking cough. I cease to press, and instantly you see the attack passes over, and the patient seems as well as before. I stick him with a pin here upon the arm, and you see the same convulsive movement. I press upon the facial nerve, and the muscles supplied by it twitch. Pressure on the scalp produces no contractions. Our patient is quite a sceptic, and thinks that perhaps by a powerful exertion of his will he might possibly prevent the attack from coming on; but you see now, when firmly determined not to permit the convulsion, he is unable to do so when the axillary nerves are pressed, and the contractions occur as heretofore. He has, however, made a discovery never before noted in a case of tetany, that, if he cause his muscles to become powerfully contracted, as when firmly holding a stick in both hands, the convulsive movements do not occur upon irritation.'

This observation of the patient may not be without some practical result, and may be borne in mind by any who may in the future meet with similar cases. That tetany is distinct from tetanus is shown by the frequency of its attendant phenomena. Painful contractions are present in both forms, but the order in which the parts of the body are attacked is remarkably different. In tetany, the contractions are centripetal, not, as in tetanus, centrifugal, the extremities being first attacked, then the trunk or head; and in less severe forms the seizure is confined to the limbs. The peculiar form assumed by the contracted hand also is apparently a constant sign of tetany, this being like the folding up in a

conical form followed by the obstetrician when about to explore the vagina. Dr. Radcliffe, in Reynolds's *System of Medicine*, questions 'whether a sufficient case is made out in describing tetany as a definite disorder, and whether it is not rather a form of spinal irritation, complicated with some graver spinal disease—spinal meningitis, myelitis, spinal congestion—in varying proportions'; and he arrives at an affirmative conclusion also from the presence in such cases of tingling and numbness, with prolonged contraction, this being, at any rate, a not unfrequent symptom in single spinal irritation. Hyperæmia, moreover, has been mostly noticed in the upper portion of the spinal cord in those rare cases when *post mortem* examinations of persons dying from tetany have been made. Dr. Hirschfelder has the following remarks in relation to causation of the disease.

'Tetany may be produced by a large number of causes. It frequently occurs in epidemiform groups, and seems to be most frequent during the winter months. It occurs most frequently in children and during lactation. In many cases, a connection exists between the tetany and intestinal irritation. Psychic alterations seem to stand in casual relation to it. A number of cases have been observed, immediately following extirpation of goitres. In one such case, the formation of a small abscess occurred, and the tetany persisted until the abscess was opened, when it permanently disappeared. In our case, the tetany occurred after injury; but whether it was produced by the injury or by the fright is very difficult to determine.'

KÖNIG ON RECENT ADVANCES IN THE TREATMENT OF TUBERCULOSIS OF BONE AND JOINTS.

PROFESSOR KÖNIG of Göttingen, in a recently published lecture (Volkmann's *Sammlung Klin. Vort.*, No. 214), has given a sketch of what is now known concerning the pathology of chronic tubercular inflammation in bone and joints, and has described the advances that have been recently made in the direct surgical treatment of such affections. In the preliminary part of this lecture, a brief allusion to the histology of tubercle is followed by a description of the typical condition of things in a case of tuberculous disease of the knee with external suppuration—the so-called cold or congestive abscess, in the lower and outer portions of the thigh. This abscess, the pyogenic membrane of which presents tubercles in its deeper parts, communicates with a fine fistula, which leads into the external condyle of the femur, and terminates there in a small patch of tubercular disease, or passes directly into the diseased joint, the synovial membrane of which is studded with tubercular deposits, the intra-articular cavity being occupied either by pus or by fungoid masses of granulation-tissue. In a case of this kind, it rarely happens that the synovial membrane is the primary seat of the disease. Most frequently the disease spreads to the joint from a morbid deposit within the articular extremity of one of the long bones, the synovial membrane being secondarily affected, or the deposit in the bone increasing in extent, and communicating directly with the interior of the joint.

Tuberculosis in bone manifests itself in two forms, which, though differing very much in appearance, may pass the one into the other, and are linked by intermediate forms of morbid change.

The most frequent form is that indicated in macerated specimens by one or more orifices in the affected bone. These orifices, varying very much in size, and of a more or less rounded form, are occupied during life by caseating tubercle and granulation-tissue, mixed with minute spicula of bone. Tubercular granulations cover the lining membrane of this cavity, and extend into the surrounding spongy bone-tissue. In the other extreme form, the bone on section presents no abnormal orifice, but one or more pale yellow patches of softened osseous tissue, which can be readily separated from the surrounding portions of ruddy and healthy bone. This pale and softened patch consists of dead bone, mixed with caseous material and pus, and in less advanced cases presents tubercles; and the boundary between the sequestrum and the surrounding healthy bone consists of granulation-tissue. This passes gradually into the first mentioned form of osseous tuberculosis; the sequestrum, becoming detached from the hard and more healthy bone, is enclosed in caseating tubercular granulations, diminishes rapidly in size, and is finally reduced to a few small osseous spicula. From tubercular foci of this kind, the disease finally extends to the surrounding soft parts, and often to the adjacent articulation. It is held that from such local tubercular disease of bone general tuberculosis may be developed. Many cases have been noted in which these two affections—the one local, the other general—coexisted without any indications in the same patient of pulmonary phthisis, of renal tubercular phthisis, or any like affection.

Osseous tuberculosis, with regard to its clinical features and its pathological anatomy, is a definite and well-characterised affection. Without inquiring as to whether it can be communicated from man to animals and from man to man, it suffices, for surgical purposes, to have the fact recognised that the disease has local infective properties, tending, as it does, to spread from the interior of a bone to the surrounding soft parts, and into the nearest joint. Osseous tubercular disease may also extend to the organism, and finally cause the death of the patient by general infection. It may also be asserted, with regard to this disease of bone, that not even in the most favourable cases can a cure be expected from any therapeutical measure short of surgical operation.

Professor König next alludes to the different stages in the recent considerable advancement in the treatment of chronic tubercular inflammation of bone. For these changes in practice, and for much of our present knowledge as to the pathological anatomy of tubercular disease in bone and in joints, we are mainly indebted to Listerism and to Esmarch's so-called method of bloodless surgery. The first step in this treatment was the removal of risks of putrefaction during the treatment by incision of a cold abscess. Next followed the practicability of thoroughly examining the interior of this abscess after incision, and of tracing its communication with its primary source, namely, a tubercular deposit in an adjacent bone. The removal of the deposit, when this is accessible, formed part of the step in advance. Then followed the practice of exposing and removing the osseous morbid deposit in cases where little, if any, suppuration had occurred. With the help of an efficacious antiseptic process, the surgeon may venture to extirpate such deposit, even though it be necessary in the course of the operation to lay open a large joint. It is stated that, in a well-marked case of well-marked tuberculous

disease of a joint, the surgeon should make it his aim, in any operative treatment, to remove, in the first place, any primary morbid deposit in adjacent bone, and then, after having made out the extent of the disease in the synovial membrane and the articular extremities of the bones, to extirpate just the parts that are diseased. In the surgical treatment of such articular disease, iodoform is believed to be a local and antiseptic agent of much value. Professor König, though confident that such treatment as has been described will in future save many joints that would formerly have been removed by resection or amputation, still acknowledges that the former operation will undoubtedly still have to be resorted to in extensive and advanced articular disease, and that in certain cases, as where the patient is old, and the disease is very severe, it will occasionally be necessary to remove the limb in order to save life.

In discussing the application of this modern surgical treatment to the different forms and complications of articular and osseous tuberculosis, Professor König deals firstly with congestive or cold abscesses. In the most frequent and typical specimens of this affection, however, where the abscess is associated with spinal disease, and is the result of morbid deposit in one or more vertebral bodies, the removal of the primary cause of the suppuration is, of course, out of the question. But, in cases of this kind, surgeons can now open the abscess without risk to the patient, and prevent putrefaction of the pus, and consequent septic poisoning and pyæmia. A large suppurating cavity may now be converted into a scantily secreting fistulous channel; and if this become permanently closed, the surgeon may assume that his action has contributed very much to bring about so satisfactory a result.

The surgeon is able to do much more in cases where the primary tubercular deposit is nearer to the surface of the body, and can be laid bare by the knife. König describes the treatment of a case of large chronic abscess in the back, associated with disease in the spine of the scapula. After thorough disinfection of the surface of the skin over the seat of the disease, the abscess is opened at its most dependent part and emptied of its pus. The inner tuberculous membrane of the sac having been removed by rubbing with carbolic sponge, and by scraping with the finger-nail, or, if it be closely adherent, with a 'sharp spoon', the surgeon looks for the small opening through which the pus had passed into the sac of the abscess, and, when he has found this, introduces a probe, and passes this along the fine sinus, which leads to bare bone in the spine of the scapula. A second incision is now made through the soft parts over the end of the probe, the diseased portion of bone is exposed, and the tuberculous deposit or sequestrum removed by the 'sharp spoon', or by chisel and hammer. The surgeon, after he has removed, so far as it can be made out, all the diseased portions of the bone, and also all tuberculous deposits in the wall of the abscess and in the surrounding soft parts, applies a disinfectant solution to the raw surfaces, drains and closes the wounds, and covers the field of his operation by antiseptic dressings. König states that the healing will be much promoted if the whole of the raw inner surface of the abscess cavity be dusted over with iodoform before the external wound is closed, and if the applied edges of both wounds be also covered by this powder. In cases where iodoform is thus applied, the discharge, it is stated, is usually very scanty, and the first antiseptic dressing may be re-

tained for many days. Should the morbid deposit in the scapula be found very near to the shoulder, König would not hesitate, in order to ensure complete removal of the disease, to open this articulation. With strict attention to antiseptic precautions, this may be done, he asserts, without inducing any permanent disturbance. In cases of abscess near to but outside an important joint, and associated with tubercular disease at the articular extremity of one of the long bones, early removal of this disease is indicated, with the view of preventing its extension to the synovial membrane and consequent disorganization of the joint.

Even in cases presenting indication of diseased bone without any suppuration, the surgeon, König states, should promptly endeavour to make out the seat of the disease, with a view to early operation. If a soft granulation-tumour or circumscribed thickening be found, or slight pain with some localised thickening be made out at a typical seat of osteal tubercular disease, an endeavour should at once be made by a bloodless and antiseptic operation to discover and, if it be found, to remove this deposit. In a case of tuberculosis of bone which has already spread to a joint, the surgeon may succeed by opening the joint in removing all the disease before it has involved much of the synovial membrane. König insists very much on the value of iodoform as a local application in the after-treatment of such cases. By the use of this agent, and its free application to the raw surfaces, together with attention to all the details of strict antiseptic practice, resection of joints, including the wrist and ankle, may be performed, even on patients of advanced age, with much increased chance of success.

W. JOHNSON SMITH.

OTIS ON VESICAL SPASM AND ITS RESULTS.

At a meeting of the New York Academy of Medicine, on April 6, Dr. F. N. Otis read a paper on 'Persistently Recurring Vesical Spasm resulting in Thickening of the Bladder Walls, Dilatation of the Ureters, Hydronephrosis, and Death from Uræmia'. Dr. Otis cited several analogous cases from literature. A man aged 55 had suffered for twenty years from difficult and frequent micturition. The trouble began with a gonorrhœa, which resulted in chronic urethritis, and finally cystitis. The patient was treated for stricture, and vesical calculus was suspected, but was not found on examination. The patient had gone the usual rounds of all varieties of regular and irregular practitioners. He sometimes obtained relief from the passage of a sound, No. 25, which passed readily into the bladder. Pain in the region of the right kidney had caused the suspicion that there might be a calculus in the pelvis of that organ. Dr. Otis saw the patient in December 1881. He was emaciated and tremulous, and had recently suffered from chills, fever, and sweating. Intense pain on micturition was chiefly referred to the neck of the bladder. The urine, more or less purulent, was passed every fifteen minutes, but contained nothing to indicate organic vesical or renal disease. One or two attacks of pain had occurred on the left side, and were thought to be renal colic, but no tenderness could be detected in that region. The urethra measured 37, but a contraction existed nearly one inch from the orifice, reducing the diameter there to 25. Having seen cases of

long standing presenting similar symptoms to this one relieved by division of contracture of the urethra at this point, he divided the orifice to correspond with the urethra behind it. A No. 37 instrument passed into the bladder of its own weight, showing that no stricture existed behind. The patient was entirely free from pain for four days after the operation, but there was complete urinary incontinence. He then began to have some control over his urine; later in the day there was slight pain, which increased as the control over the urine increased, but not to the degree that had existed before the operation. Suddenly, for the first time, he complained on the fifth day of pain in the glans penis, followed immediately by a series of spasms, similar to those from which he had previously suffered, occurring at intervals of ten or fifteen minutes. Two days later symptoms of uræmia developed, and on the fourth day after the pain attributed to the sudden appearance of vesical calculus, the patient died in a state of coma.

Dr. W. H. Welch made the necropsy. By request, the abdominal organs only were examined. Both kidneys were enlarged. The fibrous capsule was adherent to the surface of the organs. The cortical substance presented a greyish, nearly uniform appearance. The pyramids were encroached upon by the dilated calyces. There were no renal abscesses. The pelvis and calyces of each kidney were greatly dilated, and contained turbid ammoniacal urine. The ureters were likewise dilated, so that their calibre nearly equalled that of the small intestine. The walls of the ureters were thickened. No obstruction to the passage of urine existed either in the pelvis of the kidneys or in the ureters. The wall of the bladder was about four times its normal thickness. The thickening affected all of the coats of the bladder, especially the muscular tissue. The mucous membrane of the bladder was thickened, and presented, especially about the base, slightly elevated, greyish, discoloured patches, such as are seen in so-called diphtheritic cystitis. The capacity of the bladder was about that of the normal organ. It contained ammoniacal urine and a small calculus. This calculus, about an inch in length and conical in shape, resembling somewhat a canine tooth, might have been formed in one of the dilated renal calyces, and was apparently of recent formation, being very friable, and composed wholly of phosphates, without a nucleus of uric acid or oxalate of lime. The prostate was about the normal size, and had not occasioned any obstruction so far as could be detected. The calibre of the urethra seemed to be normal, presenting no evidence of stricture. The spleen was somewhat enlarged, and surrounded by firm fibrous adhesions. The liver, stomach, and intestines presented no noticeable change. Microscopical examination of the kidney showed a marked new growth of fibrillated connective tissue infiltrated with lymphoid cells. The uriniferous tubes were sometimes compressed and atrophied, sometimes found to be dilated, sometimes found to be filled with fatty epithelium.

The diagnosis was chronic cystitis with dilatation of the ureters, hydro-nephrosis, and chronic interstitial nephritis.

The cause of the cystitis was not apparent. In the absence of obstruction or other cause to account for the thickened bladder, the dilated ureters, and the hydro-nephrosis, Dr. Otis thought it quite possible that all the difficulty had been produced by spasm reflected from irritation at a distant part.

This view was corroborated by the fact that for a time the symptoms disappeared on division of the narrowed urethra near the orifice, and returned only after the passage of the calculus from the kidney into the bladder, as was evident from the *post mortem* examination. He believed that, had this probable cause of the patient's trouble, constriction near the orifice, been recognised earlier in the course of the disease, before such serious changes had taken place in the bladder, ureters, and kidneys, and had proper measures been adopted for its relief, the patient might have recovered, and enjoyed a life of health and happiness, instead of one of years of extreme suffering, terminating in death.

On the discussion of the paper, Dr. Alfred C. Post said that he had been very well satisfied, in a number of cases of urethral and vesical irritation, that a contracted state of the meatus urinarius had been one very important element in maintaining the irritation. This was often the case in senile enlargement of the prostate. There were many instances in which he found great difficulty in introducing instruments for the purpose of evacuating the bladder, and he had known instances in which this difficulty of catheterisation was obviated by dividing the meatus. A striking case of that kind he saw in consultation a year or two ago. A member of the legal profession, about sixty years of age, had suffered for a considerable time from urinary difficulty in connection with an enlarged prostate, and it had been necessary to evacuate the bladder with a catheter. But, in consequence of the small size of the meatus, a catheter of only very moderate size could be introduced; and, as was well known, the introduction of small catheters in enlarged prostate is usually much more difficult than the introduction of large ones. The small one did not push its way over the enlarged prostate as easily as did the large one. In this case, the attending physician introduced the small instrument up to a certain point, beyond which it would not pass. Dr. Post enlarged the meatus, and introduced a large catheter into the bladder, giving the patient relief. The orifice was dilated by the introduction of large steel sounds, and in the course of a few days the patient dispensed with the catheter, and had not used it now for over a year, although previously he used it regularly. A young man was sent to him from Massachusetts, having a close stricture of the urethra. The contraction was such that he passed his urine only by drops, and with a great deal of distress. Dr. Post was unable at the time to introduce any instrument. He etherised the patient, enlarged the orifice by making a slight incision before and behind, and then passed successively a series of sounds, from 15 millimètres up to 30. These instruments were passed at intervals of two or three days for a week or two, and the patient went home, entirely relieved of the difficulty from which he had been suffering.

Dr. E. L. Keyes thought the whole gist of the discussion necessarily turned upon the question of etiology. It seemed to him that the spasm of the urethra was due to reflex causes, and that relief of the spasm was produced mainly by the direct influence which the instrument passed had upon the sensibility of the deep urethra in the first place, and mechanically upon the contracting muscles in the second place. The size of the instrument was particularly important from the second point of view, just as overstretching of any tonically contracted muscle naturally would put it more in a state of ease, perhaps entirely overcoming its condition of spasm.

Many cases certainly did have symptoms of stricture, symptoms of stone, and symptoms of a great many other things persistently, which turned out to be simple cases of urethral spasm. Among these cases was that of an old sea captain who recently came under his observation, but who was now absolutely relieved, whose micturition, etc., was now perfectly normal; and yet nothing had been done for him whatever except to pass a large sound, as large as the urethra would admit, about half a dozen times. Many cases got well of spasmodic stricture by the passage of a large or smaller-sized sound, and without giving ether; but some cases, again, certainly did not recover on passing a sound as large as the urethra would admit, which recovered when these points of narrowing were razed and the larger instrument was passed into the deeper urethra; the recovery being due, not to the division of the narrowed part, but to the influence of the larger instrument upon the canal below. Still, it was true also that recovery sometimes failed to take place even after the passage of a large instrument, although there was no lesion to account for the symptoms, the mucous membrane not being inflamed. A case of this kind occurred in a patient from a New England State, in blooming health, but afflicted with permanent and frequently recurring spasm of the deep muscles of the urethra, etc., to such an extent that he had had prolonged retention of urine. The urine was absolutely negative as to indications of disease. His malady came on shortly after the death of his wife; there was no inflammatory or other pathological condition known which would account for his symptoms. He was subjected to a number of ordinary forms of treatment; and, finally, after instruments had been used without the least amount of relief, and after having suffered for two or three years, about a year ago the slight anterior narrowings were divided, a large sound was passed into the urethra, and that canal was brought up fully to its alleged natural calibre, but not a particle of benefit followed in micturition, and the patient came to him to-day to ask if anything further could possibly be done. He was now able to pass his urine only under the greatest privacy, away from any mentally disturbing conditions. A 35 or 36 instrument would pass into his bladder without giving him any discomfort. So far as was known, the mucous membrane of his bladder was perfectly normal. With regard to the case, the subject for discussion, he thought the true explanation of it was the most simple one that suggested itself: that the man arrived at a certain age in life when he contracted a gonorrhœa, which was the beginning of his trouble. For some time afterwards, however, he had no troubles, from which he suffered later. Then there arose, as a result of the gonorrhœa, spasm, and, at the same time, or following this, cystitis. The patient had difficulty in expulsion of the urine. Then he had calculous attacks, probably a number of them. These calculi might have been the occasion of further spasm about the bladder, for he had seen a number of cases of that nature, and, indeed, they were quite common. Then there was stone in the kidney, and the other lesions resulting as pointed out in the history. In this case, there was more or less pus in the urine. It often occurred, however, that where difficulty of micturition arose from spasm aside from any known lesion, as a gonorrhœa, etc., no pus was to be found in the urine at any time, as was illustrated in the patient from New England. In Dr. Otis's case, the recurring spasms

he considered sufficient to account for the thickening of the walls of the bladder; the attempt to get rid of the irritation about the neck of the bladder might easily lead to hypertrophy of the walls of that viscus. Then, on division of the contraction near the orifice of the urethra, which allowed the easy passage of stone, irritation being removed, the spasmodic contraction of the deep urethra was for a time relieved, and yielded to temporary incontinence. The larger stone afterwards exciting anew spasmodic contraction, incontinence ceased, the other symptoms, uræmia, etc., developed, ending in death.

Dr. J. W. S. Gouley said he thought Dr. Mercier a few years ago very graphically described the class of cases to which Dr. Otis's belonged. He said they originated in very persistent chronic urethritis, or, rather, cervical cystitis following urethritis; cervical cystitis, which gave rise to intense congestion underneath the mucous membrane, thus exciting what he called contracture of the urethro-vesical orifice. There were two states, a spasmodic contracture and a permanent contracture. The spasmodic contracture followed chronic urethritis, and was curable; the permanent contracture, left to itself, was incurable. Permanent contracture produced what he called a muscular valvule, which caused an impediment to urination, similar to that produced by hypertrophy of the median portion of the prostate; and this impediment to micturition caused the bladder to contract spasmodically to expel the residual urine, almost always found in these cases soon after the disease had become permanent. These wrappings of the bladder against the obstacle at the urethro-vesical orifice, caused hypertrophy of its muscular coat; the residual urine caused cystitis; the inflammation extended up the ureters, and to the pelvis of the kidneys, and the patient died after a certain number of years of pyelo-nephritis, or with acute interstitial nephritis superimposed upon a sub-acute or chronic condition. A patient might have a permanent contracture of the urethro-vesical orifice for a great many years, without suffering more than the inconvenience caused by the stagnation of the urine. Of course, the stagnant urine, being a foreign body in the bladder, would give rise to spasmodic contraction; but that the bladder could contract spasmodically without an irritant within it, or an obstacle at the urethro-vesical orifice, he did not believe. He could not conceive that spasms of the urethra could cause habitual retention of the urine. In all, or nearly all, cases such as had been described by Dr. Otis, the obstacle was at the urethro-vesical orifice. A very interesting point was, that it was not easy at the *post mortem* examination to discover the urethro-vesical valvule. The bladder had to be examined with the greatest care not to overlook it. It should be examined from above, and not first slit along its anterior border and the prostatic urethra. He had made some modifications of the rectangular sound, by which an absolute diagnosis could be made of both the muscular valvule and of the prostatic valvule. He had now a patient about thirty years of age, who had an urethritis a number of years ago, which still existed. That gentleman had for five or six years been unable to empty his bladder; and for a year before he saw him, he was micturating every few minutes; the urine was purulent. He asked him to urinate, and the patient passed an ounce or two of slightly purulent urine. He then introduced a catheter, and drew off eleven ounces of urine, the last of which was very purulent. Since then he had been introducing the catheter two or three times a

day, and the bladder was now better; but he was not, and would not be, well until the right thing was done. He thought this was the solution of this class of cases, and he would refer all who were interested in the subject to the work of Mercier. The case of encysted calculi referred to by Dr. Otis suggested some that had occurred in his practice, although they were not common. Last week he removed such a calculus from a gentleman sixty-nine years of age. Since the operation the patient was doing well, but he did not believe he would entirely recover, for the reason that he had not before been able to empty his bladder, owing to cystitis causing contracture of the urethro-vesical orifice. The urine had in all probability been dammed back in the ureters, and his kidneys doubtless were damaged.

Dr. Frank H. Hamilton said he was convinced that Dr. Otis had thrown a great deal of light on the subject of reflex irritation, caused by malformations of any sort at the meatus. He was reminded by Dr. Flint of a case which came under their mutual observation some years ago. The patient was suffering from uræmia, and died. Before death, Dr. Hamilton drew off a considerable quantity of urine with a large catheter; there was, therefore, no very marked stricture. There was rather a small meatus, as there was some difficulty in introducing the catheter. The necropsy showed that the patient had hydro-nephrosis, and other related affections consequent upon the long-continued disturbance. Whether the symptoms were due to occlusion of the meatus, was a question which now first occurred to him. He did not think of it at the time as being a possible cause, and no attempts were made to relieve it. He could not accept the possible explanation of Dr. Keyes, that the trouble began in the kidneys. It was well established that inflammatory actions here progressed in the opposite direction, from the meatus upward, very seldom from the kidneys downward; and as this patient suffered from thickening of the walls of the bladder, he would not ascribe this to pre-existing chronic inflammation of the kidneys. (Dr. Keyes explained that he did not mean that the bladder difficulty was first caused by inflammation in the kidney, but that, after calculi had passed from the latter organs, disease had become established; it might then have had something to do with the vesical affection.) Dr. Hamilton said that narrowing of the orifice did not always cause spasm in the bladder; and chronic cystitis, with thickening of the coats of the viscus, was illustrated by a large number of cases in the experience of every surgeon. He met with cases of congenital phimosis, in which there was almost constant narrowing of the meatus, with or without phimosis, and yet at no time during life did the subject suffer from any spasmodic disturbances, or from any irritation of the bladder. A case in point was a patient, at least fifty years of age, who consulted him, had congenital phimosis, with almost complete occlusion of the meatus urinarius, which was so small that he would not attempt to introduce an instrument larger than an ordinary probe. Just within there were about fifteen calculi, which had formed at that point within the past fifteen or twenty years. During all this time, he had had no trouble with the bladder or with the neck of that organ. While, therefore, some cases of spasm of the bladder and difficulty of micturition were due to narrowing of the urethral orifice, there certainly were cases where the latter deformity existed without producing the other symptoms; and he doubted whether the symptoms referred to were to be accounted for in the con-

dition of the meatus so frequently as Dr. Otis believed.

Dr. Otis closed the discussion, and mentioned the case of a young man who suffered from irritation, apparently at the neck of the bladder, and had been for a considerable time passing his urine every ten or fifteen minutes. He had never suffered from any acute inflammatory trouble. Dr. Otis found a narrow orifice, divided it, and for three days afterwards he was obliged to introduce the catheter in order to draw off the urine. At the end of that time, the patient micturated voluntarily at normal intervals, and continued well for a considerable length of time, when his trouble again came on, and contraction again took place. When this was divided, relief occurred a second time, but without the amount of retention which had taken place before. Dr. Otis was not at all certain that the relief in a considerable majority of cases which was associated with contracture of the meatus was not due to the passage of the instrument through the urethra into the bladder. He had been of opinion that in many cases this passage of the sound was essential to the production of relief, but he was equally confident, and more than confident, that the independent influence of the condition at the meatus was sufficient to produce marked trouble at the neck of the bladder. However, he would not quarrel with any one as to the *modus operandi* by which relief was obtained in these cases, but would simply say that, in the graver ones which had gone on for so long a time without relief, it was worth while to try the experiment of making the meatus correspond to the normal size of the urethra, which was easily ascertained, and then pass the sound. He was satisfied that life might be saved in this way. Dr. Hamilton had suggested that there were many cases of contraction of the meatus in which, nevertheless, there was no trouble. This was true, for the majority of the human race had a contracted meatus as compared with the size of the canal behind it, but a great many did so suffer. He had ascertained that, as a rule, in cases where trouble arose, there had been some debilitating influence, for instance, sexual excess. He had observed the occurrence of reflex disturbance in those who had had gonorrhœa, and as many of these had a deposit of cicatricial tissue, it was not impossible this cicatricial deposit had entangled terminal nerve-corpuscles in such a way as to exert something like tetanic influence. For this reason, he considered his explanation of the symptoms as the more probable one. Division of the constricted part gave relief from the reflex symptoms referable directly to the urinary passages, and also from a condition bordering on melancholia.

DONBERG ON ESERINE IN OPHTHALMIC PRACTICE.

IN an interesting paper in the *Vratch*, 1882, Nos. 4 and 5, Dr. H. A. Donberg communicates the results of the use of eserine in various cases admitted into the St. Petersburg Ophthalmic Hospital during the years 1877 to 1880. Of 3,315 cases, eserine treatment was resorted to in 723. At first, the hydrobromate and sulphate of the alkaloid were used; later, the salicylate also, all three in solution of 1 to 1.5 per cent., or in vaseline ointment (1 grain to 1 ounce). Salicylate of eserine is now preferred by the author to all other salts, because of its cheapness, less irritant properties, and superior stability (see

also Merck's description of the salicylate in the LONDON MEDICAL RECORD, Dec. 1879, p. 490). The cases which have undergone eserine treatment were these.

1. *Glaucoma*.—Eserine was used in 259 glaucomatous cases, mostly with excellent results, the explanation of which the author finds in a so-called mechanical theory of the affection. Accepting the views of Max Knies, Weber (see the LONDON MEDICAL RECORD, March 1880, pp. 117-118), Priestley Smith, and others, he regards the increased intra-ocular tension in glaucoma as the result of interrupted excretion, owing to obstruction in Fontana's space. Eserine lowers intra-ocular tension by re-establishing the permeability of filtering channels around the angle of the iris, through the energetic contraction of the pupil, and the detachment of the ciliary margin of the iris from the cornea. In the author's cases, as in the experience of many other observers, the action of eserine differed in degree, according both to the general constitution of the patients and to such local conditions of the eye as the integrity of the ciliary muscle and the iris, of the nervous apparatus, and intra-ocular contractile fibres. The better all these parts were preserved, the more successfully the remedy acted. In many mild acute cases, cure followed. In chronic glaucoma with exacerbations, the latter often entirely ceased, and the *status quo* was re-established. In many other cases, there were observed considerable and prolonged improvement, or even complete restoration of central vision, and decrease of other glaucomatous phenomena; the visual field, however, mostly remaining contracted. Recognising eserine only as an excellent palliative remedy, the author praises it as a means by which the glaucomatous eye may be prepared for effective iridectomy or sclerotomy. 'After from one to fourteen days' use of eserine,' he says, 'the eye becomes softer, the anterior chamber deeper, the pupil narrower, the media clearer, pain less, the injection disappears, and then iridectomy may be performed as easily as on a healthy eye.'

2. *Purulent Keratitis, Marginal Ulcer of the Cornea, Corneal Abscess, Ulcus Serpens, Hypopion-Keratitis*.—The highly advantageous results obtained from eserine in such cases the author attributes to the diminution of tension in the anterior chamber, which improves the nutrition and favours vascularisation of the diseased cornea. Producing contraction of the pupil, eserine prevents prolapse of the iris, and draws in the already developed prolapsus. 'Since the introduction of eserine into practice at St. Petersburg Ophthalmic Hospital, the perforation of corneal ulcers and prolapsus of the iris became as rare as they had been previously frequent.' In milder cases of hypopion-keratitis, where the lesion of the cornea was comparatively slight, and the purulent infiltration limited, the author often saw rapid absorption in two days, even of very considerable exudation in the anterior chamber, and was able immediately afterwards to use atropine for the prevention or destruction of the synechiæ. In severe cases of hypopion-keratitis, eserine was resorted to after evacuation of the purulent fluid, and that with the best results. The exudation did not reaccumulate; the purulent infiltration of the cornea and pain rapidly disappeared. Of 123 cases of corneal abscess and hypopion, in 68 (56 per cent.) Sämisch's operation or puncture was performed, and was followed by use of (1 per cent.) eserine ointment every two hours; the remaining cases were treated by

eserine alone. Of these 123 patients, 12 (9.6 per cent.) left the Hospital unrelieved; in 26 (21 per cent.) sight considerably improved after subsequent iridectomy; the remaining 85 (69 per cent.) recovered, with more or less considerable leucoma or leucoma adherens, and tolerably good sight.

3. *Paralysis of Accommodation after Diphtheria, Traumatic Mydriasis, Partial Paresis of the Oculo-Motor Apparatus*.—Here eserine was used as an adjuvant to other remedies (electricity, iodide of potassium, iron, etc.)

4. It was also used in conjunctival blenorrhœa, with corneal ulcers or prolapsus of the iris, especially in children.

5. Lastly, Dr. Donberg largely used eserine immediately after iridectomy, operations for cataract, and in some cases of removal of foreign bodies from the anterior chamber. V. IDELSON, M.D.

SWEETING ON VACCINATION.

In a memorandum recently submitted to the Metropolitan Asylums Board, Mr. R. D. R. Sweeting, late medical superintendent of the Fulham Small-pox Hospital, discusses the evidence in favour of vaccination, especially such evidence 'as would seem to be suggested by a residence at a small-pox hospital, and an office devoted to the observation of small-pox and vaccination.' After a brief reference to the discovery and the theory of vaccination, Mr. Sweeting passes to practical considerations in evidence of the value of the operation. These he treats under the heads of (1) the diminution of the death-rate from small-pox in London since the introduction of vaccination; (2) the comparative mortality in the two classes of vaccinated and unvaccinated; (3) the evidence from clinical experience; and (4) evidence from the protection of exposed classes.

In discussing the diminution of the death-rate from small-pox in London since the introduction of vaccination, the author points out that while both the general death-rate and the small-pox death-rate have diminished, the decrease in the latter has been proportionally very much greater than that in the former. This conclusion is based on a table of the general and small-pox death-rates during different periods before and after the introduction of vaccination, compiled by Dr. Carpenter from Dr. Farr's well-known table and the Registrar-General's returns. From this it appears that, while the general death-rate in 1861-70 was about $\frac{2}{5}$, the death-rate from small-pox was about $\frac{2}{5}$ of what it was in 1771-80, there being no reason for the greater decrease in the latter other than the introduction of vaccination. The table stops short at 1870, because, owing to its exceptional nature, it would be unfair, according to the author, to add the decade 1871-80. That period included three serious epidemics of small-pox, the first of which was world-wide in its prevalence, and very malignant in its character. But the exceptional nature of the period is, we think, no reason for its exclusion, and its omission seems to play into the hands of the antivaccinators. They may very justly assert that, if vaccination were the power it is held to be, the epidemic in question should not have been so widespread and malignant as it was; and they may also point out that it is easy to prove that vaccination diminishes small-pox if those years (after the introduction of vaccination) are to be excluded which are notorious for the general prevalence of small-pox. Statistics should be used, not to confirm

any particular theory, but to determine the truth, so far as it is possible to do so by their aid. From this point of view, we think the omission of the period 1871-80 is much to be regretted. It is, however, satisfactory to know that its inclusion would not have shaken the position taken up by the author in regard to the power of vaccination. Although, during the years 1871-80, the small-pox death-rate was nearly double what it was during the two previous decades, it was yet enormously below the death-rate in prevaccination days. The fact that an epidemic of such widespread prevalence and such malignity as that of 1871 had a death-rate so small compared to the death-rate of epidemics of the last century, is strong evidence in favour of vaccination.

In respect of the mortality in the two classes of the vaccinated and the unvaccinated, the author shows that, in the hospitals of the Metropolitan Asylums Board, the mean mortality among the unvaccinated has been 44 per cent.; among the vaccinated, 8 per cent. or less than one-fifth of the mortality among the unvaccinated, while the mortality among the well-vaccinated was still smaller. The objection that the vaccinated do not die of small-pox for the reason that they are 'healthy', and that the unvaccinated die of small-pox, because they are 'unhealthy', is shown to be at utter discord with clinical observation. A second objection, that it is impossible to decide whether persons who have died of small-pox have, or have not, been vaccinated, is also easily disposed of by pointing out that those only are classed among the unvaccinated, in whom no marks are to be found, (a matter which can readily be decided in almost all cases), and who are admitted to be unvaccinated, 'either by the patient, or a near relative on his behalf'.

The evidence from clinical experience consists in the fact that, in those who recover, the severity of small-pox bears an inverse ratio to the quality of the vaccination. 'In proportion as the vaccination is good, so is the severity of the attack mild, the case unaccompanied by complications, and recovery rapid, there being an almost mathematical progression as regards these points from the well-vaccinated through the fairly well vaccinated, and the poorly vaccinated to the doubtfully vaccinated, and the absolutely unvaccinated.'

The author further goes on to state that cases of other disease sent to the hospital, as small-pox, never contracted small-pox, although they were placed in the ordinary small-pox wards, provided they were vaccinated immediately on admission, and were not already incubating small-pox. On the other hand, those cases of a similar character, in whom the operation was neglected, invariably contracted the disease. 'Several cases of mistaken diagnosis, which were sent up as small-pox, admitted by us as small-pox, and hence not vaccinated, on being placed in the ward, were attacked with small-pox at the usual time afterwards.' On these clinical tests the author very justly lays great stress.

Under the 'evidence from protection of exposed classes', the author discusses the immunity from small-pox enjoyed by those nurses and servants of small-pox hospitals who have been revaccinated. Among the staffs at Homerton and Deptford, and on the hospital-ship *Atlas*, no case of small-pox occurred among such as had been successfully revaccinated by the medical officers before entering on duty. At Stockwell, only 'four cases have occurred amongst the staff since 1876'; but it is not stated whether these four had been successfully revacci-

nated. The account given of the staff at Fulham is, curiously enough, somewhat unsatisfactory. It is stated that, of 295 members of the staff, one escaped revaccination, and contracted small-pox; 294 were revaccinated, and four of these also developed the disease. In the case of these four, we learn from a statement by the chairman (see *Sanitary Record*, Feb. 1882, p. 332), that the disease 'commenced within a few days after they entered the service, and ran concurrently in each case with revaccination', or, in other words, revaccination took place after small-pox had been contracted. This the author omits to state; but, as it changes the whole complexion of the matter, it ought surely to have been mentioned. On the whole, it is concluded that, although a few cases have occurred among revaccinated members of the staff, this occurrence is very exceptional, and that the usual immunity afforded by revaccination is very strong evidence as to its value.

After some remarks on the influence of improved sanitation on the diminution of small-pox, and on the justification of compulsion in vaccination, the author concludes a very interesting paper with some valuable suggestions towards improvement in the system of vaccination of the metropolis. These suggestions are as follows:—(a) 'The substitution of the health for the parochial authority, as administrators of vaccination'; (b) 'An increased staff of vaccination officers, in connection with sanitary authorities, and a more systematic method of *bonâ fide* inquiry in non-epidemic years, as well as epidemic years'; (c) 'That the birth of no child should be registered unless the applicant produces a certificate of successful vaccination, the time now allowed for registration being extended for this purpose'; (d) 'Restriction of the performance of vaccination to public vaccinators, who, in all cases, should have had special training for the work, and should be officials of the sanitary staff.' So far at least as regards the first two suggestions, we have no doubt that they will meet with general approval.

D. MANSON FRASER, M.D.

KÖRTE ON INJURIES TO VESSELS IN DISLOCATION AT THE SHOULDER.

DR. W. KÖRTE of Berlin has recently recorded three cases of injury to the axillary artery during reduction of dislocation at the shoulder (*Archiv für Klin. Chir.*, Band xxvii, Heft 3).

The first case was one of inward dislocation of the head of the right humerus in a man aged 25. The bone was replaced by a friend of the patient, not a medical man, twenty-four hours after the injury, and was effected readily and without violence. A swelling, which had been first observed shortly after the injury, when punctured, on the seventeenth day, discharged a considerable quantity of blood. After repeated hæmorrhage from this swelling, the patient came under the author's notice on the thirty-first day, when operative interference had no chance of success. The patient died in the fifth week from hæmorrhage and septic fever, and, on *post mortem* examination, an oval orifice was found in the wall of the axillary artery on its articular aspect.

The subject of the second case was a man aged 52, who, twenty-four weeks after dislocation of the shoulder, submitted to repeated attempts to effect reduction, an anæsthetic having been administered at each sitting. After the fourth attempt, which was successful, an aneurismal tumour gradually formed

This patient died, soon after he was first seen by Dr. Körte, from rupture of the swelling and hæmorrhage.

In the third case, an axillary aneurism followed an injury to the shoulder, the nature of which at first was doubtful. As the patient, a male aged 29, when first seen, did not present any signs of dislocation, no attempts at reduction were made. Four months later, a catgut ligature was applied to the axillary artery above the seat of aneurism. After secondary hæmorrhage on the fourteenth day after this operation, the artery was tied above and below the tumour. The patient died from anæmia a few hours after the second operation. After death, a wide rent was found in the capsule of the shoulder-joint. This had, according to the author, clearly been a dislocation of the head of the humerus, which caused rupture of the artery at the time of the injury, and afterwards was spontaneously reduced.

To thirty-five old cases, collected mostly from French, American, and English surgical literature, Dr. Körte adds nine other cases that have not hitherto been brought together, including the three to which allusion has already been made, and which came under his own observation. In thirty-five of these forty-four cases, either the axillary artery had been opened, or one of its branches close to its origin. In four cases, the ruptured vessel was the axillary vein; and of the two remaining cases the bleeding was due in one to rupture of a large muscular artery, and, in the other, to rupture of several small arterial and venous branches. Ten patients only recovered; the others died from bleeding after rupture of the aneurismal tumour. Of the four subjects of injury to the axillary vein, three died and one recovered. In fifteen at least of the whole number of cases, the injury to the vessel occurred in connection with a recent dislocation. In many of these cases, the rupture of the vessel had evidently been caused by the direct action of the head of the bone at the time of injury, as either no attempt at reduction had been made, or but very slight force had been applied in order to replace the head of the bone. In one of the cases observed by Dr. Körte, the reduction was effected spontaneously. In cases of this kind, the bleeding does not come on until after reduction, and when the vessel is no longer compressed by the head of the humerus. In cases of recent dislocation at the shoulder, indications of compression of the main vessel by the displaced bone have frequently been observed. The author mentions a case in which no pulsation could be felt in the brachial and radial arteries, and he alludes to similar cases that have been reported by Erichsen and Jössel. Of the fifteen cases of ruptured vessel with dislocation of the shoulder, the former injury was due undoubtedly in five cases, and with much probability in five others, to the direct action of the displaced head of the humerus. In one of the remaining cases, the arterial injury was probably the result of extreme or unnecessary violence, as the reduction was effected by Cooper's method, without removal of the operator's boot. In another case, in which the dislocation was complicated by fracture, the artery was probably torn by a sharp edge of one of the fragments. In the remaining three cases, the cause of the arterial injury could not be determined. In twenty instances, the rupture of the vessel occurred during the reduction of dislocation of some standing. In eight of the forty-four cases, no information is to be obtained as to whether the dislocation was recent or old at the time of the vascular injury; but Dr. Körte thinks that very probably in

most of those cases the latter condition existed. In nine of the twenty cases of old dislocation, the articular injury had occurred at least two months previously; in three instances only had the displacement lasted for a very long time (sixteen weeks, four months, six months). In the collection of cases published by Mr. Callender in 1866, all the patients save one were over fifty years of age. In Dr. Körte's list, fifteen were under this age, and six of these were between twenty and thirty years of age. In eight only of the total number of cases is any express mention made of atheromatous degeneration of the arteries.

As to the precise cause of the injury to the vessel in the reduction, or attempt at reduction, of an old dislocation at the shoulder, Dr. Körte states that his collected cases are too few to enable one to arrive at any definite conclusion. Experience teaches that violent stretching of the upper limb and long-continued and forcible pressure on the soft parts of the axilla may do much mischief. But, then, every surgeon who has had to deal with old dislocation at the shoulder knows that much more force is required in such cases than in the reduction of a recent dislocation; and, as most are aware, the considerable force required, in order to restore the head of the bone to its normal position, is, in most instances, applied with impunity. There must, therefore, be some special conditions to account for the injury to the vessel in these instances, which, in relation to the number of cases of old dislocation safely and successfully reduced, are extremely rare. These conditions, Dr. Körte finds, are degeneration of the arterial walls and firm adhesion of the displaced extremity of the humerus to the surrounding soft parts, especially to the large vessels. In several cases in Dr. Körte's list, an old dislocation had been complicated by fracture of the upper end of the humerus, or of the margin of the glenoid cavity. With regard to the form of the vascular injury in these cases, the artery or vein seems in most cases to have been completely, or almost completely, torn across. Mention is made in several instances of simply a small perforation on one side of the vessel, indicating the separation of one of the branches at its origin from the main trunk. Perforation of this form may be caused also by the puncture of a sharp fragment of bone.

In eighteen cases, the aneurismal swelling formed and became apparent immediately after the reduction, whilst in twelve cases it developed gradually. In this latter class of cases, the direct flow of blood from the wounded artery is very probably retarded or arrested for a time, in consequence either of in-rolling of the divided inner coat, or of temporary maintenance of the continuity of the outer coat. In some rare cases, the in-rolling of the inner coat of the divided artery has prevented the formation of an aneurism, the result having been either complete and spontaneous recovery or gangrene of the limb. Though, in most instances, the nature of the injury is at once clearly indicated, some few instances have been recorded in which the diagnosis was rendered very difficult, in consequence of absence of pulsation in the axillary tumour and of persistence of the radial pulse.

In discussing the treatment of this injury to the axillary artery or vein, Dr. Körte states that very little is to be expected from fixing the limb and compressing the tumour. Three cases, however, of recovery after such treatment have been reported. Repeated puncture of the tumour has always been followed by

death from bleeding, alone, or associated with septic poisoning. All three cases, in which the aneurism was laid open, and the vessel tied above and below the perforation, terminated fatally. Of thirteen cases in which the subclavian artery was tied, six terminated in recovery and the others in death. Of the two cases in which the upper limb was removed, one was successful and the other terminated fatally. Dr. Körte is of opinion that, in cases of small tumour not presenting the characteristic signs of an aneurism, the most suitable treatment is complete rest of the limb, with pressure over the axilla, the patient being carefully watched. In cases of rapidly developed and undoubted aneurismal swelling, he would recommend antiseptic deligation of the subclavian artery. If the tumour have existed for some time, and pressure on the subclavian artery do not arrest its pulsation, the only possible treatment would be the very dangerous one of incision of the tumour and double ligature of the wounded artery.

W. JOHNSON SMITH.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. IJEVSKY, P. J.—On Electric Baths. (*Vratch*, 1882, No. 5, pp. 65-66.)
2. LESENEVICH, B.—Tincture of Seeds of *Carduus Mariæ* in Hæmoptysis. (*Vratch. Vedom.*, 1882, No. 11, p. 3061.)
3. NETZETZKY, V.—On the Treatment of Facial Erysipelas by Scarification and Opium. (*Vratch. Vedom.*, 1882, No. 11, p. 3069.)
4. CHAVLOVSKY.—On the Treatment of Diphtheria by Tar. (*Vratch. Vedom.*, 1882, No. 14, p. 3112-13.)
5. WITT.—On the Anthelmintic Properties of Tannate of Pelletierine. (*Petersb. Med. Woch.*, and *Vratch*, 1882, No. 5, p. 75.)
6. DAVIDOFF, P. N.—Chloral Hydrate in Diphtheritis. (*Vratch*, 1882, No. 5, pp. 76-77.)
7. MORRA and GHIRARDI.—The Antithermic Action of Carbolic Acid. (*Gazz. Méd. de Torino*, 1881.)
8. PERROTIN.—Hypodermic Injection of Ergotine. (*Thèse de Paris*, 1881.)
9. SMITH.—Sulphide of Calcium as an Antisuppurative. (*New York Med. Jour. and Obstet. Rev.*, June.)
10. SASSEZSKI.—The Treatment of Dyspepsia. (*Jour. de Méd. d'Algérie*.)
11. GORGUES.—Permanganate of Potash in Blennorrhagia. (*Jour. de Méd. de Paris*.)
12. CURRIE.—Treatment of Excessive Sweating. (*Michigan Med. News*.)
13. WIEGAND.—The White Ash. (*Amer. Jour. of Pharm.*, Feb.)
14. FERRAUD.—Antipyretic Action of Carbolic Acid and Salicylate of Soda in Typhoid Fever. (*Gaz. Méd. de Paris*, June 17.)
15. VINRA Y CARRERAS.—Vesicant Properties of Ceromeres, Mylabris, and *Cēnas*. (*Rev. de Clin. Méd.*, Aug. 1881.)
16. FRÄNKEL, E.—Experimental Researches on the Injection of Medicated Substances into the Lung-Tissue. (*Deutsch. Med. Woch.*, 1882, No. 4.)
17. STEWART, F. E.—On Nitro-Glycerine in the Treatment of Anæmia of the Brain. (*Therap. Gaz.*, May 1882.)
18. ANDEER.—Resorcine in Diphtheria. (*Centralb. für die Med. Wiss.*, No. 20, 1882.)
19. LASCHKIEWITZ.—Pilocarpine as a Remedy in Diphtheria. (*Deutsches Archiv für Klin. Med.*, Band xxx.)

20. KOHN.—The Action of Aloes. (*Berl. Klin. Woch.*, Jan. 30, 1882.)

21. STUMPF.—The Influence of Certain Drugs on the Secretion of Milk.

22. WHIFFEN.—A New Variety of Cinchona. (*Pharm. Centralb. für Deutschland*, No. 3, 1882.)

23. REUTER.—Quinine and Wet Cravats in the Treatment of Epileptoid Convulsions. (*Memorab.*, Jahrg. xxvi.)

24. HAEHNLE.—Copper in Enteric Fever. (*Memorab.*, Jahrg. xxvi.)

25. PRETORIUS.—Pilocarpine in Scarlatinal Dropsy. (*Jahrb. für Kinderheilk.*, 1881.)

1. *Ijevsky on Electric Baths*.—In a series of experiments made at Professor Drosdoff's wards, Dr. Ijevsky (*Vratch*, No. 5, 1882) tried the physiological and therapeutic effects of electric baths lately recommended by Dr. Paul (see the LONDON MEDICAL RECORD, May 15, 1882, p. 186) for various nervous affections. He came to the following conclusions as to the physiological effects. 1. On immersing into the bath (at 27 deg. Reaumur = 92.75 Fahr.), through which a warm current passes, the subject experimented upon feels a pleasant sensation all over the body. An increase of the strength of the current produces muscular rigidity, and then contraction (especially in the limbs placed near the poles), which are painless, unless the current be too strong. 2. After the bath (five to ten minutes' duration), the pulse is reduced in frequency (seven beats if normal before, eight to twelve beats if accelerated), the respiration becomes more regular, quieter, and deeper. 3. Cutaneous sensibility to Weber's æsthesiometer and electro-muscular irritability increase, electro-cutaneous sensibility decrease; the muscular strength, tested by the dynamometer, immediately after bath, decreases, but then progressively increases. 4. The weight of the body increases. The therapeutic effects were examined on patients (1) with functional nervous affections from anæmia and general malnutrition; (2) with rheumatic affections; (3) with muscular tremor from overwork; and (4) with saturnine affections. 1. Under the systematic treatment by electric baths, the appetite and general strength of patients improve; the periodical nervous paroxysms gradually decrease both in their strength and duration. 2. In rheumatic cases, the pain and tenderness decrease. 3. Tremor, resulting from the muscular exhaustion, gradually, though very slowly, decreases. 4. Saturnine functional nervous disorders, which but slowly improve under ordinary treatment, rapidly disappear under the use of electric baths, the recovery being permanent.

2. *Lesenevich on Tincture of Carduus Mariæ in Hæmoptysis*.—Dr. Lesenevich (*Vratch. Vedom.*, 1882, No. 11) tried tincture of *carduus mariæ* in five cases of phthisical hæmoptysis, administering 15 to 20 drops, in a tablespoonful of water, every two hours. In three of those cases, where an initial infiltration of the apex of the lung existed, the blood in the sputa greatly diminished in quantity after six doses, and entirely disappeared after two days' treatment. This took place after digitalis, acids, and ergotine had failed to relieve. But in the remaining two cases, with cavernous symptoms, three days' use of the tincture of *carduus mariæ*, proved quite ineffective, while ergotine, used afterwards, stopped hæmoptysis within 1½ day. [*Carduus mariæ* s. *Silybum marianum* Gaertner, fam. *Compositæ*, trib. *Cynarææ*, had been much used and vaunted as a remedy for hæmoptysis by Rademacher and his pupils, and since then forgotten. The chemical

and pharmaco-dynamic properties of this plant are little known. It contains a bitter principle, which produces nausea, vomiting, and other gastric symptoms, when the tincture of the seeds is administered in large doses. In Russia, the remedy was again introduced into practice by Professor Laschkevich of Charkoff, in 1878; and the *Vracheb. Vedom.*, 1880, No. 444, p. 1867, contains a paper of Dr. Shushliabin of Charkoff, who, basing on eighteen months' experience, recommends the use of tincture of *carduus mariae*, from forty drops to a teaspoonful, several times a day, for hæmoptysis depending on congestion to the lungs.—*Rep.*]

3. *Netetzky on the Treatment of Facial Erysipelas by Scarifications and Opium.*—Dr. V. Netetzky of Chojent, Syr-Darian District, Asiatic Russia, describes (*Vracheb. Vedom.*, No. 11, 1882) a treatment of erysipelas successfully practised by native (Sart) barbers, and consisting in numerous superficial vertical scarifications made by a razor over the whole diseased part. After the bleeding spontaneously stops, they moisten the affected surface by an aqueous solution of opium (two grains to a drachm), and cover with a layer of cotton-wool. Rapid cure follows, as the author alleges; he himself observed two cases successfully treated in this way.

4. *Chavlovsky on the Treatment of Diphtheria by Tar.*—Dr. Chavlovsky of Warsaw (*Vracheb. Vedom.*, No. 14, 1882) is very enthusiastic about the treatment of diphtheritic angina by the internal administration of a paste, made by trituration of one or two teaspoonfuls of oleum cadinum, with half a pound of fresh butter. A teaspoonful of this mixture is given every two or three hours. Simultaneously, the author applies the same (but a stronger) preparation to the front of the neck, covering it, after smearing, with wadding. He also makes the patient swallow a piece of cold fresh pure butter every quarter to half hour, or an hour. He alleges that this treatment rapidly produces diminution of the lymphatic swelling and pain, and makes swallowing much easier.

5. *Witt on the Anthelmintic Properties of Tannate of Pelletierine.*—Dr. Witt, of Moscow, successfully tried the action of the alkaloid of pomegranate in three cases of botriocephalus latus, and in two of tænia. His patients suffered from worms during one-and-a-half to eight years, the usual treatment having failed to bring away the worm's head. In each instance, a single dose of 1.5 grammes of pelletierine, given after usual preparation by dieting, and followed in two or three hours by 15 grammes of castor-oil, proved to be sufficient to expel the worm entire. [Dr. Witt's experience, therefore, confirms the results of Landrieu, Dujardin-Beaumez, Laboulbène, and others. In the LONDON MEDICAL RECORD, June 1880, p. 228, is to be found Dujardin-Beaumez's paper on the alkaloids of the pomegranate.—*Rep.*]

6. *Davidoff on Chloral in Diphtheritis.*—Dr. P. N. Davidoff of Peterhof (*Vratch.*, 1882, No. 5) highly recommends the internal administration of chloral in diphtheritic affections of the larynx in children, three to five grains every two hours, in solution with gum and a drop of peppermint essence. [The author arrived at this method quite accidentally, and independently of other observers. He did not know that before him Lorenzo treated diphtheritis by glycerine solution of chloral (3ss to 3j in 3ss by teaspoonfuls; in mild cases locally only), or that Korn nine years ago successfully treated the faucial diphtheritis by local application of (15 to 30

per cent.) glycerine solution. (*Allgem. Med. Central-Zeit.*, June 1, 1881.) See also Rokitsky's paper on 'Chloral in Diphtheria', in the LONDON MEDICAL RECORD, May 1879, p. 192.—*Rep.*]

V. IDELSON, M.D.

7. *Morra and Ghirardi on the Antithermic Action of Carbolic Acid.*—Morra and Ghirardi publish, in the *Gaz. Med. di Torino*, 1881, and *Jour. des Science Méd. de Louvain*, a research, of which the following are the conclusions. 1. The best method for the internal administration of carbolic acid is the rectal passage. 2. Carbolic acid has the constant effect of lowering the temperature, but its action does not last long. 3. Further administration of the remedy may arrest a fresh rise of temperature. 4. Before repeating the enema, it is necessary to wait until the temperature shall have again attained 39 deg. Cent. (102.2 Fahr.) 5. Carbolic acid has a different action in different persons. It is more energetic in women, in whom its effects should be watched from the commencement. In their case the dose should be smaller. 6. The dose of carbolic acid in an enema should not exceed 2 grammes (30 grains). 7. The action of the remedy, in all probability, is less appreciated on the pulse, and still less on respiration, but further observations are necessary on this point. 8. It would be well, during treatment, to watch the condition of the heart and the senses, although the authors of the research have not had the opportunity of recording any signs of cardiac weakness or of albuminuria brought on by the use of this remedy.

8. *Perrotin on Hypodermic Injections of Ergotine.*—Dr. Perrotin, in his *Thèse de Paris*, 1881, points out that the method of operating plays a large part in the success of hypodermic injections of ergotine. The injection must be made slowly in the cellular tissue, as far as possible from the deep surface of the skin, with a clear liquid. All preparations showing any deposit should be rejected. The administration of ergotine, by the hypodermic method, is preferable to any other to combat the hæmorrhage consecutive on abortion and delivery. The action is more rapid and certain. Injections seem to be useful even in hæmorrhage of those organs which show few smooth fibres. Epistaxis and hæmoptysis are favourably influenced by this treatment. Experiments have been made which have given satisfactory results in treating small aneurisms, varices, and atony of the bladder; but where the success is truly surprising, is in prolapse of the rectum. Up to the present time, every operation has in a short time brought on radical cure.

9. *Smith on Sulphide of Calcium as an Antisuppurative.*—Dr. Andrew H. Smith furnishes to the *New York Med. Jour. and Obstet. Rev.*, for June 1882, a report of the committee on the use of sulphide of calcium for the purpose of preventing or diminishing suppuration. After giving the experience of several members of the society, Dr. Smith concludes his report as follows. Judging from this limited number of cases, it would seem that we are warranted in concluding that in many cases of suppurative affections, ranging from the small pustules of acne to extensive suppurating surfaces, an appreciable, and often a very marked, benefit is derived from the use of calcium sulphide; suppuration which would otherwise take place being averted, or the quantity and duration of an existing discharge being lessened. At the same time, its action is not uniform; and in many apparently favourable cases it will fail entirely. The drug is somewhat prone to irritate the stomach;

and this circumstance affords an indication for small doses frequently repeated instead of larger ones at longer intervals. One-tenth of a grain every two hours in acute cases will generally secure the full therapeutical action of the drug, but larger doses may sometimes be required, and some patients will bear well a grain three or four times a day. Even in small doses, the sulphide will occasionally produce headache, and the patient is usually more or less annoyed by eructation of sulphuretted hydrogen.

10. *Sassezki on the Treatment of Dyspepsia*.—M. Sassezki (*Jour. de Méd. d'Algerie*) has determined, in the cases of three patients suffering from chronic gastritis and four healthy persons, during a phase of profuse sweating, the degree of acidity of the liquid taken from the stomach, the digestive power of the latter on fibrine, and the amount and the degree of acidity of the urine. He found that the sweats weakened the digestive power of the gastric juice, reduced at the same time its acidity, and that also of the urine; and this the more energetically the more abundant the perspiration was. From the practical point of view, the author inquires if, amongst dyspeptics subject to perspiration, it would not be well to try atropine to diminish the perspirations, and to increase, at the same time, the acidity of the gastric juice. He, likewise, is of opinion that this same acidity might be increased by rendering the urine alkaline by means, for instance, of a vegetable diet. He throws out the suggestion, whether the instinct which induces the inhabitants of hot countries to instinctively prefer a vegetable diet, is not to be found here.

11. *Gorgues on the Employment of Permanganate of Potash in Blennorrhagia*.—MM. Spillman and Weiss have produced good results in the treatment of blennorrhagia by permanganate of potash. These authors base their treatment on the rapidly destructive action of this substance on a micro-organism which they describe as existing in blennorrhagia. The same means was made the subject of a work by M. Gorgues, analysed in the *Jour. de Méd. de Paris*. Most of the cases of blennorrhagia and vaginitis brought to notice had passed the acute stage; chronic discharges running on for months, absolutely rebellious to any other mode of treatment, completely disappeared in twelve or fifteen days. M. Gorgues employed solutions of 1 in 250 or 1 in 500. The pain in the female is very slight. There is never seen, even with the injection of a solution of one per cent., a discharge tinged with blood, such as takes place just after the employment of caustics. No particular means of using it is to be observed. If the injection penetrate into the bladder, there is no cause for uneasiness. On the contrary, Demarquay has treated with success cases of chronic cystitis in this way. M. Gorgues gives one, sometimes two injections daily. In the male, the injection of a solution of 1 in 250 has determined slight dryness.

12. *Currie on Excessive Sweating*.—Dr. T. H. Currie of Lebanon says, in the *Michigan Med. News*: 'For over thirty years I have used the following prescription, without a single failure, in sweats from whatever cause: Alcohol, Oj; sulphate of quinine, ʒi. Wet a small sponge with it and bathe the body and limbs, a small surface at the time, care being taken not to expose the body to a draught of air in doing it. In one case, a neighbouring physician was poisoned while dressing a mortified finger. He suffered untold misery, and was drenched with perspiration for a number of days, and his life was despaired of. When I saw him, I ordered him to be bathed imme-

diately in the above solution, and that this be repeated once in two hours. The third application stopped all perspiration, and convalescence began at once.'

13. *Wiegand on the White Ash*.—A short paper, by Mr. T. S. Wiegand, in the February number of the *Amer. Jour. of Pharm.*, describes the white ash, *Fraxinus Americana*, sometimes, though improperly, termed *alba*. It grows throughout the North-Eastern States, and is also found in Canada. The bark, which is the part used in medicine, is found in commerce of a light salmon colour, and has little odour, but a bitterish taste. A wine of white ash is largely used in Philadelphia for dysmenorrhœa, and is made by macerating and percolating one pound of the ground inner bark with sherry wine, collecting four wine pints. The dose is a teaspoonful three times a day.

14. *Ferraud on the Antipyretic Action of Carbolic Acid and Salicylate of Soda in the Treatment of Typhoid Fever*.—At a recent meeting of the Paris Société Médicale des Hôpitaux, M. Ferraud (*Gaz. Méd. de Paris*, June 17) gave an account of M. Desplats' clinical researches on the antipyretic action of carbolic acid and of salicylate of soda in the treatment of typhoid fever. He said that he had criticised a former communication of M. Desplats on the same subject; and M. Desplats had protested against the criticism in which M. Ferraud mentioned that the doses currently employed by M. Desplats were likely to bring on serious complications. This is also the opinion of MM. Damaschino, Siredey, Dreyfus-Brissac, Féréol; and Dujardin-Beaumetz believes that he has summed up the opinions, pronounced in the course of this discussion, by saying that carbolic treatment is dangerous, and exercises no influence on the progress of the fever. This conclusion M. Ferraud thinks to be too rigorous. M. Dreyfus-Brissac and M. Féréol are of opinion that the accidents are partly due to accumulation of carbolic acid in the blood and tissues. M. A. Robin, basing his opinion on numerous observations, believes that this substance does not remain more than forty-eight hours in the organism. This is, doubtless, true when the kidneys are intact, but in typhoid fever these glands are often attacked with changes, of a temporary nature, it is true, but which impede elimination. M. Ferraud also points out, on this part of the question, that those persons who have occupied themselves with the mechanism of the symptoms of poisoning brought about by the abuse of carbolic acid in surgical practice, have charged this substance with inducing in its passage through the kidney temporary lesions which oppose the ulterior elimination of the drug. It has likewise been said that the poisoning, consecutive on the use of iodoform dressings in certain subjects only, was due to the fact that concomitant use had been made of carbolic acid, the latter irritating the kidney so as to obstruct the renal filter in such a manner that the iodine set free by the iodoform accumulates in the blood.

15. *Vinra y Carreras on the Vesicant Properties of Cerocomes, Mylabris, and Enas*.—Dr. J. Vinra y Carreras (*Revista de Clin. Med.*, Barcelona, Aug. 1881, p. 357.) has undertaken at the instigation of the therapeutic commission of the Academy of Medical Sciences of Catalonia, researches were undertaken with the object of determining the properties of these insects kindred to cantharides. In the various experiments, the dried powder or plasters made with the powder were used. The conclusions of this memoir are of some importance. 1. There

exist in the tribe of cantharides many vesicant species, by means of which a powder, which contains a larger or smaller quantity of cantharidine, and which is available for the preparation of vesicant plasters, is obtained. 2. Some kinds of mylabris, of ceromes, and of enas, yield a powder which is acceptable in practice, and even in certain cases preferable to the powder of common cantharides, because it causes less acute pain. 3. The local effects are analogous to those of ordinary blisters, as regards the revulsive action and the formation of phlyctenæ containing serous matter. However, their application does not give rise either to general phenomena or to local troubles of the genito-urinary organs. It is, therefore, to be hoped that, by multiplying and varying researches, a substitute for cantharides may be found, possessing all their advantages without any of their drawbacks.

16. *Fraenkel on Injection of Medicated Substances into the Lung-Tissue.*—Records of experimental attempts to deal directly with the lung-tissue, whether for the treatment of existing disease or for physiological purposes, are to be found but sparingly in medical literature. Dr. E. Fraenkel records (*Deutsche Med. Woch.*, No. 4, 1882) a whole series of experiments made with a view to the study of the effects produced by the injection into the lung-tissue of various medicated substances: 1. upon the local tissues; 2. upon the general organism. He used the following substances: carbolic acid, in a strength of 1, 2½, 4, and 5 per cent.; 4 per cent. watery solution of boric acid; 5 per cent. of iodoform in olive-oil; 2, 4, and 5 per cent. solution of acetate of alumina. Rabbits were used for the experiments, and the injections were made with a syringe fitted with a very long and fine cannula. The number of daily injections varied from one to six, and the amount injected each time was always the same, 1 gramme. In hardly any case was there any reaction produced, a slight cough here and there being the only symptom. Even when the animals were kept alive for weeks, no changes took place which could indicate any spreading affection of the parenchyma of the lung, and physical examination invariably gave a negative result. Some of the animals gained considerably in weight. The pathological results obtained are classed as primary and secondary. The first consisted of hæmorrhage into the lung-tissue and into the pleural cavity; but in neither case was it of importance, for the most part becoming absorbed, and in only one or two cases leaving a slight pleural adhesion. The secondary results consisted of local infiltrations and cellular proliferation in the lung-tissue, but in every case these were found to remain local, and to show every tendency towards healing. From the stand-point of these experiments, and from certain other clinical facts, Dr. E. Fraenkel states his conviction that the human lung, also, will come to be regarded as an especially adapted organ for the reception, by parenchymatous injection, of antiseptic remedies. Cases of progressive chronic phthisis he regards as particularly indicative of this method of treatment, especially in the earlier stages of catarrh and infiltration of the apex; and he looks to it to alter the character of the inflammation in the already affected spots, and to assist the natural tendency of the healthy tissue around to throw out a protecting barrier of inflammatory material. In cases, also, of gangrene of lung and putrid bronchitis, the injections might be of service. In one case of this latter kind, injections of five per cent.

carbolic lotion were employed, and, although no improvement was observed, there was also no trace of any injury having been suffered by the lung.

E. CLIFFORD BEALE, M.B.

17. *Stewart on Nitroglycerine in the Treatment of Anæmia of the Brain.*—Dr. F. E. Stewart of New York city speaks highly (*Therap. Gaz.*, May 1882) of the value of nitroglycerine in the treatment of epilepsy and other complaints supposed to be due to cerebral anæmia. 'Sick headache of the anæmic variety,' he says, 'in which compression of the carotid artery on the painful side increases the pain, is immediately mitigated by this agent. When, however, compression relieves the pain, the remedy is worse than useless.' He mentions, incidentally, the effects produced on chemists and others engaged in the manufacture of the pills and other preparations of nitroglycerine. Mr. G., for example, stated that an invoice of nitroglycerine, in the form of a ten per cent. solution, was received by him, and that for two days he was engaged in transferring it into bottles for greater safety in storing. The first day he suffered from a dull pain in the head, which increased as he continued the operation of bottling. There was marked throbbing of the temporal arteries, and the face was moderately flushed. The pain continued after leaving the laboratory, and sleeplessness was a marked symptom. For several days after handling the drug, he suffered from a continued dull, unremitting headache. The testimony of Mr. L., who is engaged in the same work, is much to the same effect. In his case, it also causes headache—a dull, continuous pain, lasting for some hours. Mr. McG., who is occupied in preparing the mass for the pills, says that both he and his associates suffer much from headache and throbbing in the carotid and temporal arteries. In some instances, a feeling is experienced as if the head were swollen across the temporal region. Nausea and throbbing are of frequent occurrence, but, after a time, they disappear, and the system seems to acquire a tolerance of the drug. In the handling of it, however, no matter how often, headache is the result. The nausea resembles sea-sickness, and is relieved by going out into the fresh air. The headache, however, continues for several days, and insomnia is a frequent symptom. In the pill-room, a large number of girls are employed, and, when they are making nitroglycerine pills, the symptoms already mentioned frequently occur. The pills are made by the ordinary method, being rolled out by hand. The girls are at first attacked with severe headache, flushed face, throbbing arteries, nausea, and vomiting, and are frequently obliged to leave the room, or even to go home, to recover from the effects of the drug. After a time, a certain degree of tolerance is established, and the most severe symptoms, in a great measure, disappear; but headache is always a result of the handling of the mass in pill-making, even with those accustomed to the operation.

WILLIAM MURRELL, M.D.

18. *Andeer on Resorcine in Diphtheria.*—Dr. Andeer strongly recommends this remedy in diphtheria (*Centralbl. für die Med. Wiss.*, 1882, No. 20). In the slighter cases, he says, a sharp application of resorcine crystals or of concentrated vaseline ointment of resorcine will be sufficient; in the severer forms, it must be applied repeatedly; and in the severest forms it must be used internally as well as locally. Dr. Andeer alleges that he has treated in this manner 222 cases of diphtheria; all, without exception, recovering. The good results of a purely

local treatment in the milder forms indicate, he considers, that the disease is then a purely local and not a general affection. JAMES ANDERSON, M.D.

19. *Laschkeewitsch on Pilocarpine as a Remedy in Diphtheria*.—The author (*Deutsches Archiv für Klin. Med.*, vol. xxx, Heft 1-2, Nov. 1881) replies to Guttman's high laudation of pilocarpine as a specific against diphtheria, and narrates nine cases treated in the Diphtheria Hospital of Charkow with this remedy without the least benefit.

20. *Kohn on the Action of Aloes*.—From a long series of observations on man and the lower animals, Kohn (*Berl. Klin. Woch.*, Jan. 30, 1882) finds that, when a solution of aloes is used hypodermically, there is no purgation. The same result follows the injection of aloin. Only in one case did any purgation take place, and that was in a hysterical patient. After the administration of aloes, there were once or twice inflammation of the lower intestine, congestion of the kidneys, and ecchymoses of pericardium and pleura, and often the urine contained albumen and tube-casts. Kohn concludes his paper by remarks on the quantity of aloes necessary to destroy life in various animals.

21. *Stumpf on the Influence of Certain Drugs on the Secretion of Milk*.—As the result of a prolonged series of experiments on the secretion of milk, Stumpf has come to some interesting practical conclusions. He used iodine as an example of a metalloid, lead as a metal, morphia and pilocarpine as alkaloids, salicylic acid as an aromatic, and ethyl-alcohol as representative of the alcohol group. With regard to the quantity of milk, he finds that iodide of potassium causes a considerable diminution; that alcohol, morphia, and sugar of lead do not alter the quantity; that salicylic acid somewhat augments the amount; and that pilocarpine is no promoter of the secretion. As regards the quality of the secretion, iodide of potassium causes some disturbance of the glandular functions, with fluctuations of the ingredients; alcohol and spirituous liquors increase the relative amount of fatty material, so that they are to be regarded as dietetic means of promoting the secretion of milk; lead, morphia, and pilocarpine cause no change; salicylic acid appears to produce an increase of the sugar. Lastly, with reference to the passage of drugs into the milk, he finds that iodide of potassium passes at once into the secretion, and disappears in the human subject as soon as the administration ceases, but in herbivora remains longer. It does not appear in any relative amount to the quantity taken, and in all cases it is united with the caseine. Alcohol in herbivora does not pass into the milk. In small doses, lead only passes into the milk in traces, and continues to do so for some time after the cessation of administration. Salicylic acid in large doses only appears in very small amount in the milk, and more in man than in herbivora.

22. *Whiffen on a New Variety of Cinchona*.—Whiffen (*Pharm. Centralbl. für Deutschland*, No. 3, 1882) has analysed a new variety of cinchona bark (*cinchona cuprea*) which has recently come into the market, and found it to contain a crystalline alkaloid, which he has named 'ultra-chinin'. It is present in the bark to the extent of 0.1 to 0.8 per cent., and appears to possess the action of the usual cinchona alkaloids.

23. *Reuter on Quinine and Wet Cravats in the Treatment of Epileptoid Convulsions*.—The author (*Memorabilien*, Jahrg. xxvi, Heft 8) treated a child

of his own, who suffered from severe convulsive fits, occurring always during the night, with the usual anti-epileptic remedies, without the production of much benefit. He finally tried the administration of a fourth of a gramme (4 grains) of hydrochlorate of quinine at bedtime, wrapping at the same time a cold wet towel round the child's neck. Amelioration of the symptoms soon followed, and the fits became much less frequent. After a time, the wet towel was discontinued, and the quinine was given only twice in the week, without a single return of the fits.

24. *Haehle on Copper in Enteric Fever*.—Burq, having observed immunity from cholera among copper-workers, recommended the use of copper in the treatment of enteric fever. Haehle (*Memorabilien*, Jahrg. xxvi, Heft 8) has carried his suggestion into practice, and has found that copper is a specific and valuable remedy in many cases of typhus. He administered 1.5 grammes of the tincture of the acetate of copper (*German Pharmacopœia*) in the course of two days, giving a portion of it every two hours. Reduction of temperature to the extent of 2 deg. to 4 deg. Fahr. followed in from one to two days. Vomiting or diarrhoea does not contra-indicate its employment, and the copper does not appear to injure the stomach. Its mode of action is doubtful, Haehle suggesting that it may act as an anti-septic.

25. *Pretorius on Pilocarpine in Scarlatinal Dropsy*.—Pretorius, in the clinic at Strasburg (*Fahrh. für Kinderheilk.*, 1881), has attempted to estimate the value of pilocarpine in the treatment of the dropsy and uræmia of scarlatinal nephritis, and has arrived at the following conclusions. 1. The hydrochlorate of pilocarpine often saves life when other known remedies fail. It should, however, only be resorted to in really obstinate cases. 2. When the dropsical symptoms begin to disappear under the influence of pilocarpine, this remedy should be discontinued, and other means used to maintain the action induced, as repeated administration of pilocarpine may cause too rapid absorption of the dropsical fluid, which may be followed by uræmia. 3. The respiratory organs are to be carefully watched after every administration of the pilocarpine, and its administration stopped, if any symptom of pneumonia present itself; for occasionally inflammation is set up in the lung by the action of the alkaloid on the circulation, and, possibly, also on the lung-secretion.

MATTHEW HAY, M.D.

MEDICINE.

RECENT PAPERS.

1. HEITLER.—Acute Dilatation of the Heart. (*Wiener Med. Woch.*, No. 22, 1882.)
2. WEISS.—On Diastolic Bruits. (*Wiener Med. Woch.*, No. 21, 1881.)
3. PRIERAM.—Neurosis of the Vagus Nerve. (*Wiener Med. Woch.*, No. 22, 1882.)
4. BIZZOZERO.—The Diagnostic Signification of the Alveolar Epithelium of the Lung in Sputum. (*Centralbl. für Klin. Med.*, 1881, p. 529.)
5. CHROSTOWSKI, B.—On a Case of Combined Small-Pox and Scarlatina. (*Gaz. Lekarska*, 1881, No. 53.)
6. MOUTARD-MARTIN.—Statistical Results of Operation for Empyema.
7. STRÜBING.—Symptomatology of Cystic Degeneration of the Kidney in the Adult. (*Deutsches Arch. für Klin. Med.*, 1882.)

8. HUCHARD.—Sudden Death by Syncope in Enteric Fever. (*Gaz. Hebdomadaire de Med. et Chir.*, June 16.)
 9. HEERMANN.—Goître, Cretinisme, and Idiocy. (*Friedreich's Blätt. für Gerichl. Med.*, 1882, p. 128.)

1. *Heitler on Acute Dilatation of the Heart.*—After noticing the cardiac dilatation which gradually occurs when the compensation by hypertrophy for valvular disease ceases to be sufficient, Dr. Heitler says that he has also, in many cases, been able to diagnose an acute dilatation of the heart, occurring suddenly and disappearing as suddenly (*Wien. Med. Woch.*, 1882, No. 22). This acute dilatation, he says, can be diagnosed only by prolonged and careful physical examination. It may affect all the cavities or only one, the left ventricle or the left auricle alone, or only the right side of the heart. He records a case in which, from the physical signs, there was evidently dilatation of the right side of the heart, with great palpitation, anxiety, and cyanosis; the heart beating violently 200 times per minute, but giving a very weak pulse. Within five minutes, when he wished to demonstrate this condition, it had disappeared along with the symptoms. The patient had mitral insufficiency and stenosis, and suffered frequently from such attacks. Dr. Heitler believes that acute dilatation frequently occurs in the early stages of fevers, in endocarditis, anæmia and Bright's disease.

2. *Weiss on Diastolic Bruits.*—Following up his account of three cases of diastolic bruit heard over the heart's apex, and in the third and fourth left intercostal spaces at the sternal border, yet without *post mortem* appearances to account for the symptoms, Dr. Weiss publishes a carefully observed case (*Wien. Med. Woch.*, No. 21, 1882), in which there was a distinct diastolic bruit, audible only over the heart's apex. With this exception, the physical examination of the heart gave normal results. The patient died of pyloric cancer, and the *post mortem* examination showed recent endocarditis and pericarditis, too recent, Dr. Weiss believes, to account for the murmur which had been observed for several weeks. There was also, however, old endocarditis on the mitral valve, with consecutive contraction, and aneurysmal projections with their convexities into the auricle. Dr. Weiss believes these projections to have been the cause of the diastolic murmur, and points out that a diastolic murmur, heard over the heart's apex, without other signs of cardiac and circulatory disturbance, may be regarded as 'accidental', as having for the cardiac functions no important meaning.

3. *Pribram on Neuroses of the Vagus Nerve.*—Professor Pribram of Prague records (*Wien. Med. Woch.*, No. 21, 1882) the following case. A young woman, aged 30, had for a number of years been troubled with palpitation of the heart, coming on after mental excitement. In December of last year, during such an attack, the pulse rose rapidly to 200, but was regular and small. Respiration was regular; the face pale. The patient would not remain in bed, and during five days the pulse remained between 220 and 240. Respiration, appetite, and sleep, were normal. Two days later, the pulse rose to 300, dicrotic, and scarcely perceptible. The veins of the neck were dilated; the heart-sounds were replaced by low-pitched murmurs; fine crepitation was heard at the bases of both lungs. The patient had an indescribable feeling of faintness; it seemed as if something must give way in the neck, when suddenly the pulse sank to the normal. Notwithstanding the

great fall of the arterial pressure during the attack, there was no diminution in the secretion of urine, and there was no albumen in the urine. In almost all previously recorded cases of tachycardia, there has been combined bronchial asthma; here there was no affection of the lung whatever. In cases of paralysis of the vagus, anatomical alterations have been found, the nerve, for example, involved in cheesy glands. Here, from the sudden disappearance of the symptoms, there could be no question as to this. The inhibitory influence of the vagus seemed to pass to the heart once more, almost as if a stop-cock had been opened. Digitalis and faradisation of the vagus had no beneficial effect. Towards the end of the attack, the voice was hoarse, indicating affection of the recurrent laryngeal nerve.

4. *Bizzozzero on the Diagnostic Signification of the Alveolar Epithelium of the Lung in Sputum.*—The large granular epithelium that appears in sputum, the writer considers undoubtedly proceeds from the alveoli (*Centralb. für Klin. Med.*, p. 529, 1881). He recalls the fact that in the alveoli there are two distinct kinds of epithelium, viz., broad squamæ, and smaller, but thicker, and more granular cells. It is the latter class that undergoes rapid proliferation in inflammation, the other remaining unaltered. And it is the latter class that appears in the sputum. When present in large quantity in abundant sputum, they form a bad symptom; as indicating a general catarrh of the alveoli, but, if in small quantity, they have no significance. JAMES ANDERSON, M.D.

5. *Chrostowski on a Case of Combined Small-Pox and Scarlatina.*—The author relates (*Gaz. Lekars.*, 1881, No. 53) an interesting instance of synchronous occurrence of small-pox and scarlet fever in a patient aged 19. On the fifth day after scarlatina had been diagnosed, red spots and papules appeared over the face, upper extremities, hard palate, and other regions which remained free from scarlatinous rash. The temperature immediately fell from 105.5 deg. to 103.6 deg. For some days new papules continued to appear, always selecting, with mathematical preciseness, not scarlatinous spots. The transformation of papules into pustules coincided with desquamation of the scarlatina eruption over the trunk. Afterwards, the course of the small-pox was regular and generally mild. Four weeks later, the patient left cured. There was no albuminuria.

6. *Moutard-Martin on the Statistical Results of the Operation for Empyema.*—M. Moutard-Martin remarks that two forms of suppurative pleurisy must be distinguished; 1. sudden suppurative pleurisy, or subacute suppurative pleurisy; 2. suppurative pleurisy following serous pleurisy, either before any surgical operation or after thoracentesis. 1. Sudden suppurative pleurisy may be diagnosed even before effusion (as in a case quoted by M. Moutard-Martin at the Paris Hospital Medical Society) by the extreme acuteness of the commencing symptoms, the pain in the side, anxiety, and fever. In this case, thoracentesis must be performed as soon as effusion shows itself. Four examples are related of recovery after a single evacuation of 220 grammes (7.75 ounces), 300 grammes (10.5 ounces), 350 grammes (12.75 ounces), and 370 grammes (13 ounces) of well-defined pus. Should the case be reproduced after thoracentesis has been done twice, and should there be persistence of the febrile symptoms, there must be no hesitation in performing the operation for empyema. Nine cures without a single failure are recorded. They recovered very rapidly. In one

case in twenty-three days, in another in twenty-seven days, and in another in twenty-eight days. In all these cases, M. Moutard-Martin says there was complete cicatrization without fistula at the time mentioned. 2. In suppurative pleurisy consecutive on serous pleurisy, the treatment must be commenced by successive punctures, which frequently suffice to produce cure. But if, after the evacuation of a small quantity of purulent or sero-purulent fluid, the flow be impeded by false membranes, the operation must be performed immediately, and then issue is frequently given to enormous quantities of pseudo-membranous masses. Again, if the liquid be reproduced rapidly after thoracentesis, and if the improvement which ensues do not last long, the operation must be performed. V. IDELSON, M.D.

7. *Huchard on Sudden Death by Syncope in Enteric Fever.*—In the *Gazette Hebdom. de Méd. et de Chir.*, of June 16, 1882, is a paper on sudden death in enteric fever from failure of the heart. It is stated that all references to authorities on this subject, with the theories as to causation, are to be found in a paper by M. Huchard, published in the *Union Méd.* in 1877. The case which serves as the subject of the article is, in the absence of all mention of confirmation of diagnosis by *post mortem* examination, of a rather vague nature. A woman, aged 35, 'took cold', on Feb. 22, at a theatre, and had, thereafter, an attack of 'bowel complaint', which readily yielded to treatment. She was sufficiently well by the 27th to preside as hostess at a large dinner party; was worse on the 28th. After passing a good day on March 3, being then able to receive visitors and talk incessantly, she died suddenly on the morning of the 4th, after asking for something to drink. All through the attack, the temperature is said never to have exceeded 38.2 Cent. (100.75 Fahr.), nor the pulse 96. [Attention is drawn to the fact that death from heart failure is rare in enteric fever so early as in this case; but of what else do enteric patients die in the early stages? Early deaths do occur, though rarely; but we doubt if the patient would show such symptoms as in the case in question. We quite agree with the writer in his surprise at the sudden and unexpected termination of the case, but fail to see how he can call the disease 'typhoid', unless he saw the bowel. If he did see it, he has forgotten to say so—a rather serious omission.—*Rep.*] F. TWINING.

8. *Strübing on the Symptomatology of Cystic Degeneration of the Kidney in the Adult.*—Communications on this subject are rather scarce in medical literature; clinical observations are rare, but *post mortem*, accidentally, numerous examples are found, symptoms indicative of which have not been noticed during life. In other cases, phenomena similar to those of chronic Bright's disease precede the fatal exit of the patient, or symptoms pointing to some form of renal lesion have been noticed, but passed over as unimportant. A case related by Strübing (*Deutsches Archiv für Klin. Med.*, 1882) was that of a woman aged 51, who had been in very good health until her forty-first year, in which hæmaturia with pain in the region of the kidneys was followed by progressive marasmus. Nothing beyond hypertrophy of the left ventricle and enlargement of both kidneys could be made out, and albumen was only temporarily present now and again. At the *post mortem* examination, it was found that, instead of the carcinoma it was expected to reveal, the enlarged kidneys had undergone a total change of structure, being about 20 centimètres

(7.8 inches) long, and containing numerous large and small cysts, some of the size of a hen's egg. The contents, on analysis by Baumstark, were found to consist of—1. choleasterin; 2. two albuminous bodies, namely, serum-albumen and a globuline; 3. six grammes of urea to every 100 cubic centimètres of the fluid. Uric acid, leucine, and tyrosine were not present.

F. W. ELSNER.

9. *Hermann on Goltre, Cretinism, and Idiocy.*—Dr. Hermann contributes a memoir on this subject (*Friedreich's Blät. für Gerichtl. Med.*, 1882, p. 128), and arrives at the following conclusions. 1. Although poor living, badly ventilated dwellings, improper clothing, etc., may influence the development of these diseases, they cannot actually produce them. 2. There is no connection between the number of marriages between blood-relations, and the number of instances of cretinism. Marriages between blood-relations appear rather to diminish than to increase the tendency already present of producing cretinism. On the other hand, idiotism may be, and appears to be, produced by such marriages; e.g., Howe records seventeen cases of marriages between blood relations producing 95 children, of whom 45 were idiots, 12 scrofulous, 1 deaf, and 1 dwarfed. 3. Cretinism is never uniformly manifested in a locality, but is developed at varying times in certain streets, or houses, and that it becomes active at the time when the human organism is not yet fully developed. 4. The hereditary character of the malady is in certain cases undoubted. 5. In the case of cretinism in the children of healthy parents, there must be a direct specific alteration of the germs by the deleterious matter, without any change occurring in the parents themselves. They are, so to speak, the vehicle for the peccant material. On the other hand, it appears that, when the disease has once appeared in a family, a specific tendency thereto can be traced in the descendants. Even if this tendency have been latent for a time, it often reappears in consequence of some either normal physiological cause, or some newly developed pathological irritation.

THOS. STEVENSON, M.D.

SURGERY.

RECENT PAPERS.

1. HOLT.—True Aneurism of the Brachial Artery. (*Amer. Jour. of Med. Sciences*, April 1882.)
2. GROSCH.—Resection of the Hip. (*Centralbl. für Chir.*, No. 14, 1882.)
3. PARKER.—Reunion of Divided Nerves by Suture. (*The Med. News*, May 13.)
4. LUCAS.—Collection of Cerebro-Spinal Fluid beneath the Scalp, following Fracture of the Skull. (*Guy's Hosp. Rep.*)
5. MOSETIG-MOORHOF.—On the Question of Iodoform Poisoning. (*Centralbl. für Chir.*, 1882, No. 11.)
6. TAYLOR.—The Abortive Treatment of Buboes with Carbolic Acid. (*Amer. Jour. of Med. Sciences*, April.)
7. THOMAS.—Removing Benign Tumours of the Breast without Mutilation. (*New York Med. Jour.*)
8. RICHTER.—On Unreduced Dislocations. (*France Méd.*, 1st April 1882.)
9. FALKENHEIM.—Suture and Union of Nerves. (*Deutsche Zeit. für Chir.*, Band xvi.)
10. SCHEDE.—On Iodoform. (*Centralbl. für Chir.*, 1882.)
11. FÜRBRINGER.—True Spermatorrhœa in an Old Man after Severe Injury to the Spinal Cord. (*Berl. Klin. Woch.*, No. 43, 1881.)

12. KITAIEVSKY, M. K.—Gummatous Affection of the Patella and Knee-Joint. (*Vratch*, 1882, No. 6, pp. 86-89.)
 13. TEPLIASHIN.—On a Case of Gangrene of the Scrotum caused by Cold. (*Vratch*, 1882, No. 6, p. 93.)
 14. TEPLIASHIN.—Case of Rupture of the Penis in a Boy. (*Vratch*, 1882, No. 6, p. 93.)
 15. ALEXIEFF.—On a Case of Abscess of the Brain. (*Vratch. Vedom.*, 1882, No. 8, p. 3011-12.)
 16. IVANOFF, T.—Case of Foreign Bodies in the Alimentary Channel. (*Vratch. Vedom.*, 1882, No. 13, p. 3101.)

1. *Holt on True Aneurism of the Brachial Artery.*—Dr. L. Emmett Holt has recently recorded (*Amer. Jour. of Med. Sciences*, April 1882) a case of true aneurism of the brachial artery in its upper third, which was cured by compression maintained for ten hours by means of a conical pad. The patient was a labourer, aged 36, who discovered a pulsating tumour in the right arm, about four weeks before he came under the notice of the author. His attention had been directed to this tumour shortly after he had been at work shaking some carpets. There was no distinct history of syphilis, and a careful examination of the heart was made without detecting any organic disease. Active treatment was resorted to on the following day. Digital compression was first thought of, but was given up, and the following contrivance resorted to. A piece of splint board was cut, about a foot and a half long, and three inches wide at one end, tapering to half an inch at the other. The latter was padded, so that a hard ball was formed about three fourths of an inch in diameter. The patient was placed at the edge of the bed, and his arm, stretched out at a right angle to the body, rested upon a table. The surgeon or his assistant, seated in front of the patient, rested the broad end of the splint board against the front of his shoulder, whilst the small and padded end was placed upon the brachial artery near the patient's axilla. With one hand the surgeon steadied this and kept it in position, while his other hand was kept on the tumour, to make sure that the arterial pulsation was completely controlled. This pad was applied on June 1 at 10.40 A.M.; the treatment was continued during the day by assistants, who relieved each other at intervals of from half an hour to an hour. No pulsation was noticed after five o'clock. At nine at night no bruit could be detected, and the tumour was hard and firm. A hard pad was now placed in the axilla, and the arm bandaged to the side. The patient recovered, without there having been any sign of relapse. In January last, Dr. Emmett Holt examined the patient, and was unable to make out any tumour. After a careful search through the literature of the subject, Dr. Emmett Holt has collected thirteen other cases of brachial aneurism of supposed spontaneous origin. In some of these cases, slight exciting causes are stated to have been noted; but the author is not disposed on this account to exclude such cases from the number, as there are few surgical diseases, he says, which are not attributed by the patients to some antecedent strain or fall. In three only of the fourteen cases was the aneurism situated in the upper third of the arm. In six cases, nearly one half of the whole number, the tumour appeared at the bend of the elbow. In five cases no assignable cause of the aneurism could be made out, whilst in six there was a history of some strong muscular effort or a blow. Dr. Holt's patient had used a crutch on the right side for thirty years, in consequence of distortion of the right lower limb after articular osteitis affecting the knee; but the author is not prepared to admit this as the cause of the

arterial degeneration in his case. In eight of the fourteen cases, the ligature was applied with ultimate success. In two of four cases in which the vessel was tied close to the sac within two or three inches, secondary hæmorrhage followed. The Hunterian operation was performed in two cases, in one of which suppuration of the sac resulted. Compression was tried in nine cases, with success in four, and failure in five. Of the unsuccessful cases, four were afterwards cured by the ligature. Of the four successful cases, digital compression alone was applied but in one. Dr. Holt states that aneurisms situated at the bend of the elbow, or just above this region, can be easily managed by pressure or by the ligature. The real difficulties in the treatment of brachial aneurism are encountered when the tumour is situated in the middle or upper third of the artery. Broca held the opinion that aneurism of the upper third of the brachial artery called for ligature of the axillary, and that pressure could not be applied on account of the proximity of the large nerve-trunks.

2. *Grosch on Resection of the Hip.*—Dr. J. Grosch, in a recently published dissertation, an abstract of which is given by Dr. A. Bidder in the *Centralbl. für Chir.*, No. 14, 1882, has arranged in tabular form 166 collected cases of resection of the hip, treated antiseptically. In this return information is afforded of the condition of the joint in each case at the time of operation; and in each of the two main tables, one of recoveries, the other of fatal cases, there are three subdivisions, distinguishing three different stages of the disease. The first subdivision includes those cases in which the changes in the joint are slight, and the small quantity of the pus has not yet made its way to the surface; the second includes cases in which there is much suppuration and sinuses have been formed; whilst in the third we have cases of much exhaustion of the patient through prolonged discharge and very extensive destruction of the affected parts. Some difficulty, however, has of course been experienced in arranging so many cases in sharply defined groups. In addition to the tables of recoveries and deaths, there is one of incomplete recoveries and cases still under treatment, reference being made in this to the prognosis of each case. Of 120 completed cases, forty-four were fatal, showing a mortality of 36.7 per cent. This accords with other recent statistics, while Leisrink's returns of cases treated in the pre-antiseptic period show a mortality of not less than 64 per cent. With regard to the causes of death after antiseptic resection of the hip, Grosch's tables show that there is a much reduced risk of accidental traumatic affections, and that in a very large percentage of cases the fatal result is due to extension of tuberculosis to the organism. It follows from this, that the surgeon should be careful in his selection of cases for operative interference, and choose in preference those in which the joint is the only seat of the tubercular disease. If the cases in which the hip has been resected under antiseptic precautions be arranged in two groups, one of these groups including cases treated from 1870 to 1875, the early and, so to speak, the probationary period of antiseptic treatment; the other group, those treated during the past six years, during which the technical details have been perfected; it will be found that in the latter group the mortality has diminished by about 9 per cent. It is shown in Grosch's tables that the mortality is much less in children than in adults; with the former, there is no death after operation for disease in the first stage; in the second

stage of the disease the mortality in children is 24 per cent.; in the third stage 67.5 per cent. With regard to the duration of treatment, there is no striking difference in any of the three stages. Antiseptic resection, as compared with the operation in former times, does not seem to influence the subsequent mobility and the extent to which the functions of the affected limb are restored. One interesting fact shown by this collection of cases is, that with perforation of the acetabulum, the mortality of the operation is increased by about 20 per cent. Dr. Grosch has drawn the following conclusions from his tables. 1. Under the protection of the antiseptic method, the mortality of resection of the hip has been reduced by about one-half. 2. The death-rate is much lower in the second than in the first period of the antiseptic treatment. 3. The prospects of success from resection of the hip are the better, the earlier the operation is performed. 4. The duration of treatment is considerably diminished after the antiseptic operation. 5. The most frequent cause of death after the operation in recent cases has been tuberculosis. 6. The antiseptic method affords a great protection against traumatic complications after resection of the hip. 7. The functional results of resection of the hip, though yet satisfactory, have not been much improved by the antiseptic method. 8. The rate of mortality from the operation is higher in adults than in children.

3. *Parker on Reunion of Divided Nerves by Suture.*—In an annual address delivered on April 25 to the South Carolina Medical Association (*The Med. News*, May 13, 1882), Dr. F. L. Parker, of Charleston, gave the statistics of all the cases he had been able to find on record of primary and secondary reunion of divided nerves by suture. Twenty-three cases in all of reunion of nerves, it is stated, have been reported; twenty-one by suture; and two by simple apposition. Of these, twelve have been successful, two partially successful (sensation, but not motion, restored), four incomplete, and five unsuccessful. Of the twenty-one cases of reunion by suture, six were primary, and fifteen secondary. Of the six primary, two were successful, two were incomplete, and two unsuccessful. Of the fifteen secondary, six were successful, three incomplete, and six unsuccessful. In five cases the sutures were passed through the sheath, in three through the substance of the nerve, and in thirteen it is not stated how they were passed. The secondary operations were performed from one to nine months after the injury, and in one case two years after, but in the last unsuccessfully. Failure in cases of secondary operation depends, according to Dr. Parker, upon several contingencies, which cannot be foretold prior to exposing the nerve. Among these are mentioned: 1. The degree of atrophy of one or both ends, particularly the distal end, preventing their adequate adjustment; 2. The length and size of the neuroma on one or both ends, requiring a sacrifice of nerve-tissue, and complicating apposition by forcible stretching or wide dissection; 3. Atrophy of the neurilemma, forcing the operator to apply sutures through the substance; 4. Neuritis or sclerosis of the distal or central end; 5. Mutilation of the nerve-ends after resection, often unavoidable; 6. The manner of healing of the wound and the degree of suppuration. Dr. Parker then gave the history of a case which had been under his own care. In this, a case of paralysis of the extensor muscles of the hand and forearm, from division of the posterior interosseous nerve, there was complete recovery

after resection and reunion of the ends of the divided nerve by carbolised catgut.

4. *Lucas on Collection of Cerebro-Spinal Fluid beneath the Scalp, following Fracture of the Skull.*—A boy, aged twenty-three months, was on July 24th, 1878, admitted into the Evelina Hospital with a recent injury to the head through a fall. He was quite unconscious, and remained so until the following morning. During the night, there were frequent convulsive movements. The whole of the forehead was much bruised and swollen, more especially on the left side, and the left upper eyelid was extensively ecchymosed, of a deep claret colour, and too much distended to be raised. There had not been any discharge of blood or fluid either from the ears or nostrils, and there was no paralysis. The patient progressed favourably from the date of admission with regard to his general condition. On July 31, hard ridges, indicating a line of fracture, could be felt on the forehead and scalp, extending backwards to the anterior fontanelle. The swelling of the forehead, which had previously diminished very much, began on August 9 to increase again, and on the evening of that day became of considerable size. With a hypodermic syringe, about twenty minims were drawn from this swelling, of a clear, slightly alkaline fluid, containing a few small flakes. On the following day it was found that the tumour pulsed, and that it varied in size, increasing when the child screamed. A ridge of bone could be felt through the swelling, commencing about the middle of the left supra-orbital ridge, and ascending irregularly on the forehead somewhat to the right as far as the scalp; it then crossed the median line and extended about half-an-inch to the right and beyond the fontanelle. Another ridge could be felt, ascending at first vertically from the left orbit, then inclining slightly to the right to join the fontanelle on the left side. A long narrow depression could be felt between the ridges broader above than below. On August 17, the swelling on the scalp had almost disappeared. On September 17, nothing of importance having for a month been noticed in the child's condition, the child was discharged from the hospital. The swelling up to that time had varied from time to time, and was especially influenced by crying. A large gap was still to be felt in the frontal bone, extending from above the left orbit towards the fontanelle. On November 10, 1879, a year and three months after the occurrence of the accident, the child, who had not during the interval suffered from fits, nor from any symptoms that could be attributed to injury of the brain, was bright, intelligent, and in ordinary health. There was no longer any swelling of the forehead, but a large fissure could still be plainly felt. The patient was again seen on February 16, 1881, and up to this date had apparently suffered no inconvenience as a result of the accident. This case, which is recorded by Mr. R. Clement Lucas in the last volume of *Guy's Hospital Reports*, adds a fourth to those already recorded, in which, after a severe simple fracture of the skull, a large tumour of cerebro-spinal fluid appeared beneath the scalp. One of these previous cases was reported by Mr. Lucas in 1876, another by Mr. Erichsen, and the fourth by Mr. Haward. The subjects of these cases were all young children, and in each instance a fall from an upper storey was the cause of the fracture. As injuries of the head in adults are never followed by collection of cerebro-spinal fluid beneath the scalp, an easy deduction, Mr. Lucas states, may be drawn, that the elasticity and

thinness of children's skulls permit or determine the injury upon which this rare phenomenon depends; whereas in adults the strong and firmly ossified calvarium cannot be driven in to a like extent without an accompanying laceration of the scalp. Hence similar injuries in adults are compound, and may be followed by the escape of cerebro-spinal fluid through the wound, but never, so far as recorded cases indicate, by collections beneath the scalp. Mr. Lucas thinks that in cases of this kind some wound of the ventricular cavity exists. In his first case there was complete evidence that the tumour had communicated with the lateral ventricle, the descending and posterior cornu of which had become dilated into a large cavity, and it is supposed that in the second case the anterior cornu had been wounded. Mr. Lucas concludes by stating 'that though it may be premature to state that in every case where watery fluid escapes from the vertex, the ventricular cavity has been laid open; yet all *post mortem* evidence seems to point to this conclusion, whilst the view that the fluid escapes from the subarachnoid space rests only upon conjecture.'

W. JOHNSON SMITH.

5. *Von Mosetig-Moorhof on Iodoform Poisoning.*—The observations of Dr. von Mosetig-Moorhof (*Centralbl. für Chir.*, 1882, No. 11) on this subject will be read with interest in connection with those of other observers recorded in a late number of the LONDON MEDICAL RECORD, since they represent the results of a vast field of experience. Having used the remedy in carrying out the Listerian treatment in about 3,000 in-patients and about 4,000 out-patients, he has never yet met with a single case of iodoform poisoning. The writer explains this fact in various ways. 1. He has never employed the drug in large quantities. 2. The iodoform was never subjected to pressure within a wound. 3. The dressings were only rarely changed. 4. The wounds were never washed in dressing, in order to introduce fresh iodoform, 'since, as is well known, absorption takes place more rapidly in granulating than in fresh wounds.' 5. From the very beginning of the treatment only perfectly pure materials were used, *i.e.*, without the addition of any other antiseptic. The use of carbolic acid in conjunction with iodoform, he regards as not only damaging, but dangerous, since the carbolic acid is always liable to act irritatively upon the kidneys, and may thus hinder the due excretion of the iodine set free within the body, and give rise to its accumulation in the blood.

E. CLIFFORD BEALE, M.B.

6. *Taylor on the Abortive Treatment of Buboes with Carbolic Acid.*—Dr. Morse K. Taylor, U.S. Army, in the April number of the *Amer. Jour. of the Med. Sciences*, publishes a paper on the abortive treatment of buboes by injections of carbolic acid. He reports twenty cases in which he certainly obtained remarkably successful results, and he states that within the last seven years he has treated nearly one hundred and fifty cases of various forms of lymphadenitis, arising from specific and non-specific causes; and, where he saw the cases before the formation of pus was well established, he had not failed to arrest the process immediately, and allay the pain in a few minutes. His method is to inject from ten to forty minims of a solution, containing eight or ten grains to the ounce, directly into the interior of the inflamed gland.

7. *Thomas on Removing Benign Tumours of the Breast without Mutilation.*—Dr. G. Thomas (*New*

York Med. Jour.) expresses himself in favour of removing benign tumours of the breast as a rule, because the mere presence of a tumour in the breast usually renders the patient apprehensive, nervous, and often gloomy, while, with our present improved methods of operating, the patient is exposed to slight risks, the danger of growth of the tumour is removed, and with this disappears, at the same time, that of the subsequent degeneration of a benign into a malignant growth. If, in addition to these advantages, we can add the avoidance of all mutilation to the person, we have strong grounds for departing from the practice of non-interference. The method of operation described, Dr. Thomas has practised thus far in a dozen cases. He distinctly states that it is entirely inappropriate for tumours of malignant character, and that it is applicable neither to very large nor to very small benign growths, being insufficient for the former and unnecessarily radical in its character for the latter. The growths for the removal of which he has resorted to it have been fibromata, lipomata, cysts, and adenomata, and have varied in size from that of a hen's egg to that of a duck's egg, or a little larger. The operation is thus performed. The patient standing erect and the mamma being completely exposed, a semicircular line is drawn with pen and ink exactly in the fold which is created by the fall of the organ upon the thorax. This line encircles the lower half of the breast at its junction with the trunk. As soon as it has dried, the patient is anæsthetised, and with the bistoury the skin and areolar tissue are cut through, the knife exactly following the ink-line until the thoracic muscles are reached. From these the mamma is now dissected away, until the line of dissection represents the chord of an arc extending from extremity to extremity of the semicircular incision. The lower half of the mamma which is now dissected off is, after all ligature of bleeding vessels, turned upward by an assistant and laid upon the chest-walls just below the clavicle. An incision is then made upon the tumour from underneath by the bistoury, a pair of short vulsella forceps is firmly fixed into it, and, while traction is made with it, its connections are snipped with scissors, the body of the tumour being closely adhered to in this process, and the growth is removed. All hæmorrhage is then checked, and the breast is put back into its original position. Its outer or cutaneous surface is entirely uninjured, and the only alteration consists in a cavity at the former situation of the tumour. A glass tube with small holes at the upper extremity and along its sides, about three inches in length and about the size of a No. 10 urethral sound, is then passed into this cavity between the lips of the incision, and its lower extremity is fixed to the thoracic walls by adhesive plaster, and the line of incision is closed with interrupted suture. In doing this, to avoid cicatrices as much as possible, very small round sewing-needles are employed; these are inserted as near as possible to the edges of the incision, and carry the finest Chinese silk. The line of the incision is then covered with gutta-percha and collodion. If the glass drainage-tube act perfectly, there is no offensive odour in the discharge, and the temperature does not rise above 100 deg.; the tube is in no way interfered with until the ninth day, when the stitches are removed. If, on the other hand, the tube does not appear to perform its function satisfactorily, it is manipulated so as to cause it to drain all parts of the cavity, and warm carbolic water is freely injected through it every eight hours.

On the ninth day, when the stitches are removed, the tube is removed likewise.

8. *Richet on Unreduced Dislocations.*—Professor Richet, in a lecture on clinical surgery, reported in the *France Méd.*, 1st April 1882, points out the various conditions in which old dislocations exist, and the method to be followed in order to reduce them. In old dislocations, the muscles which surround the injured joints are partly atrophied, sometimes even they are absolutely paralysed; in all cases they are weakened or powerless. In recent dislocations, on the contrary, the muscles are contracted and resist vigorously the efforts of the surgeon. How does it then happen that recent dislocations, notwithstanding the resistance of the neighbouring parts, should be easier to reduce than old dislocations which are surrounded by atrophied muscles, and offer no resistance? The cause of these difficulties and differences is to be found entirely in the adhesions which in the old dislocation have been set up between the displaced head of the bone and the neighbouring parts. Thus, before attempting to reduce these kinds of displacement, it is necessary to break down the fibrous tissues which fix down the head of the bone in its abnormal position, and to mobilise it. This is done by moving the limb about in various directions. It is only subsequently to this that the surgeon will attempt to reduce the fracture by performing traction, which should be made with an expenditure of a certain strength and the greatest attention.

9. *Falkenheim on Suture and Union of Nerves.*—Dr. Falkenheim (*Deutsche Zeit. für Chir.*, Band xvi, Heft 1 and 2) says that Arnemann, in 1787, was the first to experimentalise on the suture of nerves, but was unsuccessful. Flourens, in 1820, was the first to take up the subject again; and he restored function by uniting the stumps of two different nerves. Eulenburg, Landois, and others, got no results. In fact, experimental pathology could not succeed in deciding the question as to the justification of suture of nerves, whilst surgery, in the hands of Laugier and Nélaton, quickly answered it. Each had in 1864 a case of injury to the median nerve under treatment, and, on stitching the nerve, the current was restored in a few days. Unexpectedly, however, light was thrown on the subject by Richet, who, in 1867, had a case of injury to the median nerve under treatment, which proved undoubtedly that division of a nerve did not completely suspend all nervous influence in the district of the divided nerve. Sensibility had remained, even in Nélaton's case, before the nerve was united. Arloing and Tripier proved that Richet's observation was correct, by showing numerous anastomoses between peripheral nerve-branches; and they referred the sensibility of the peripheral nerve-stump to sensory fibres going backwards. Létievant had preceded their work, however, by his doctrine of *motilité et sensibilité supplées*, which he had applied to explain a whole series of cases in which previously nervous regeneration had been supposed to have taken place. He came to the conclusion, supported by numerous experiments, that, notwithstanding division of a nerve, according as it is sensory, motor, or mixed, its region of distribution preserves its individual function (more or less weakened of course), thanks to the action of muscles and nervous apparatus independent of the injured nerve. These *fonctions supplées* may gradually become as healthy as before the trunk was injured. Falkenheim believes this theory has been proved often enough; actual

restoration of a paralysed part does not, of course, take place in these *fonctions supplées* but very nearly, the part of the paralysed muscles being taken by those by which they were strengthened when they were in a healthy state. The possibility of a restoration of nervous current Létievant allows, but only after a year has passed, and later perhaps; fibres growing from the central to the peripheral end (*ré-génération*). Primary and secondary suture of nerves should always be carried out; the latter, in old cicatrised injuries, being performed by exposing and freshening the divided, partially incarcerated ends. Amongst experimenters, Gluck has had the best results. He did a neuroplastic operation on a chicken by removing a piece of its sciatic nerve, and replacing it by a piece three centimètres long from a rabbit's sciatic, and had astonishing success. The author did not succeed in restoring the nerve-current in his cases of suture of the sciatic and vagus nerves (twenty-three experiments); he therefore altered his method, and after dividing a nerve left the ends in apposition, but without stitching them together, and operated thus on twelve rabbits, making the interesting observation that they were all able to run about, notwithstanding the interruption to the nerve-current in the sciatic, the passive action of the extensor communis digitorum pedis being the sole and only reason thereof. These experiments also gave a negative result; but the author concludes that, no matter what may take place, it is right to unite the ends, as repair is thereby hastened. The human organism is quite indifferent to the operation, direct or indirect, especially under the use of Listerism, as proved by the thirty-nine cases quoted by the author. The chief use of it is to prevent union of the ends of the nerves with the tissues, and, by shortening the space, to hasten the resumption of nervous conduction. In recent injuries suture is a duty, the indirect method being preferable if possible. Should the tissue beyond the nerve have suffered, and there be too much strain, the direct method must be chosen, needles and sutures of the finest calibre being used to prevent much interference. Bruised portions must be removed, as they degenerate, and the limb must be fixed immovably in the position causing least tension to the ends of the divided nerves. Neuroplastic transplantation requires further experiment.

F. WILLIAM ELSNER.

10. *Schede on Iodoform.*—Schede (*Centralbl. für Chir.*, No. 1, 1881), in the hospital at Hamburg, has, in common with many German surgeons, made extensive use of iodoform as a substitute for carbolic acid in the antiseptic treatment of surgical cases. His experience leads him to conclude that, while it acts as a powerful antiseptic, it in many cases produces powerful toxic effects from absorption. These often are developed very suddenly, and appear to be of a cumulative character, and may occasionally end in the death of the patient. This is important, as it is not generally known that iodoform can act so poisonously when applied externally. Indeed, it is commonly believed to be almost innocuous. Schede gives a classification of the various degrees of its toxic effects which he has observed. Slight impairment of general sensibility is extremely frequent, accompanied by a small elevation of temperature. In other cases, there are great depression of spirits, headache, and loss of appetite, along with a rapid pulse. Sometimes the pulse-rate mounts to 150-180 per minute, and the temperature may or may not be febrile. The most dangerous form of the poisonous

action of iodoform is witnessed in those cases where the brain is greatly affected, in the form either of acute meningitis, or of mental aberration. Rapid pulse, vomiting, convulsions, and profound coma, terminating in death, may ensue, even if the application of the iodoform have been discontinued on the first appearance of the symptoms. The author advises that iodoform should not be applied to fresh wounds if at all extensive, nor should it be injected into large abscesses. As an application to small recent wounds, especially if superficial, and to granulating surfaces, he has rarely found that bad general effects follow. He states that it is as strongly and as certainly antiseptic as the more complicated and less convenient Listerian treatment.

11. *Fürbringer on a Case of True Spermatorrhœa in an Old Man after Severe Lesion of the Spinal Cord.*—The patient, aged 69, was affected, in consequence of a fall, with paraplegia and anæsthesia of the lower extremities and of the lower part of the abdomen, and also with paralysis of the bladder (*Berlin. Klin. Woch.*, No. 43, 1881). Thirty hours after the accident, erection of the penis occurred, and from this time until death (on the third day), the urine drawn off by the catheter contained numerous spermatozoa, and there was a constant discharge of fluid containing spermatozoa. *Post mortem* examination showed fracture of the arch of the eighth dorsal vertebra, luxation of the third dorsal vertebra, with complete disintegration of the spinal cord at the level of the fourth vertebra, fracture of the sternum, and rupture of the pleuræ. The genital organs were healthy.

12. *Kitaëvsky on Gummatus Affection of the Patella and Knee-Joint.*—Dr. M. R. Kitaëvsky of St. Petersburg, details (*Vratch*, 1882, No. 6) two cases of this rare affection. In both patients (women aged 26 and 17), along with night-pains, cachexia, alopecia, swelling of the lymphatic glands, chronic periostitis and other characteristic signs, there were at first observed small tumours, which gradually softened and ulcerated in the centre. Simultaneously, serous exudation into the knee-joint took place. Under specific treatment by mercury and iodide of potassium internally, and mercurial plaster externally, both patients rapidly improved, and left hospital cured. [In the LONDON MEDICAL RECORD, February 1880, is reported an instance of syphilitic affection of joints. The literature of the question is to be found in Dr. Giess' paper in the *Deutsche Zeit. für Chir.*, 1881, vol. xv.—*Rep.*]

13. *Teplishin on a Case of Gangrene of the Scrotum caused by Frost.*—Dr. Teplishin of Glasoff records (*Vratch*, 1882, No. 6) the case of a patient admitted with gangrene of the scrotum, with temperature 104 deg. and delirium. The smooth satin-white scrotum was separated from the perineal and pudendal regions by a line of demarcation, no other parts being frost-bitten. The integuments and tunica dartos of the whole scrotum sloughed and were removed, after which the rough surface was dressed antiseptically. The temperature rapidly fell, and some days later granulations appeared. In six weeks cicatrization was complete. Sloughing in this case appeared after the patient, scantily clad, one severely cold winter day, had driven home from a distant forest, sitting all the way astride a timber-tree.

14. *Teplishin on Rupture of the Penis in a Boy.*—Dr. Teplishin (*Vratch*, 1882, No. 6) narrates the following case as worthy of remark, not only because

of some surgical particulars, but also because of the brutality of the Votiak population, among whom the author practises. A boy, ten years old was admitted, his penis being tightly tied up with a string, within an inch from the pubes. The urethra at the point of strangulation was ruptured, and urine dropped out of a fistulous opening. The portion of the penis in front of the ligature was hanging down, connected with the rest by a narrow bridge, and looking very pale and much swollen. As it was quite useless, and brought nothing but extreme discomfort to the patient, the author cut it away by small scissors at the strangulated spot. No vessel required tying. The author's investigation proved that the boy had been a victim of a brutal practical joke played on him a year ago at a marriage feast by some drunken Votiaks, who, to entertain the company, tied up the boy's penis as tightly as possible, and cut off the ends of the string near the knot.

15. *Alexieff on a Case of Abscess of the Brain.*—A peasant, aged 20, while hunting, was struck by a large splint from his burst gun, which entered into his frontal bone a little to the right side, above the glabella. After having recovered consciousness, he ran home, when he extracted the splinter. Profuse hæmorrhage and fainting followed. For the next four days he was well, but on the fifth day there appeared giddiness, general weakness, and frontal headache. On the tenth day after the accident, the temperature rose to 100.4 deg.; on the sixteenth, to 102.3 deg.; on the eighteenth, to 104.6 deg. On the twenty-fourth day, the patient died in a comatose state, having been unconscious for the last three or four days. He occasionally vomited during the last ten days. There were no convulsions, no paralysis, no affections of sight, hearing, smelling, or sensibility. *Post mortem* examination showed a hole (as large as a sixpenny-piece) in the frontal bone, leading into an abscess between the bone and the dura mater, and containing a large piece of bone. The latter closed an opening leading to another abscess in the substance of the brain itself, which occupied nearly the whole anterior portion of the right hemisphere, and was as large as a hen's egg.

16. *Ivanoff on Swallowing of Twenty Needles by a Child.*—A boy aged 3, while playing with a needle-case, had swallowed twenty needles (5 centimètres long). Five days later, sixteen needles were discharged *per anum*, glued together by feces. The remaining four came out, one by one, on the sixth and seventh days. There were no symptoms, except occasional abdominal pain, and no treatment.

V. IDELSON, M.D.

PATHOLOGY.

RECENT PAPERS.

1. KOCH.—Pathogenic Organisms. (*Mittheil. der Kais. Gesundheitsamtes*, 1881; *Rep. der Anal. Chem.*, 1882, Heft 1.)

2. HART, MRS. E.—The Function of Fibrin. (*Quarterly Journal of Microscopical Science*, July 1882.)

3. LANGOVI, A.—Four Cases of Multiple Cirrhosis of Various Organs: Kidneys, Liver, Lungs, Heart, etc. (*Mediz. Obozr.*, Jan. 1882, pp. 37-45.)

4. VARGUNIN, V. A.—On the Artificial Production of Tuberculosis by Inhalation of Atomised Phthisical Sputa. (*Vratch*, 1882, No. 6, pp. 81-83.)

5. TARENEZKY, A.—Anatomy and History of Development of Cyclopia in Man. (*Medizinskaia Biblioteka*, April 1882, pp. 1-6.)

6. REGNE.—Hæmatic Crises in Acute Diseases, with Sudden Defervescence. (*Thèse de Paris*, 1881.)

7. DÉJÉRINE.—Gangrene of Nervous Origin. (*Le Prog. Méd.*, 1882, No. 6.)

8. ROTH.—Malformation in the Region of the Ductus Omphalo-Mesentericus. (*Virchow's Archiv*, Band lxxxvi.)

1. Koch on the Investigation of Pathogenic Organisms.—This is the first communication by Dr. Robert Koch from the Imperial Board of Health in Berlin. Dr. Koch points out in the first place the objects he has set before himself in the observation of the lower organisms in relation to health, and gives his opinions on the methods of detecting pathogenic organisms. He describes the methods of observation by means of fluids and tissues, shows the importance of photographic representations, and discusses the transmission of pathogenic organisms. Dr. Koch considers that the old methods of cultivation in fluids are imperfect, and recommends cultivation on slices of boiled potatoes and on jellies of various kinds, that obtained by the coagulation of blood being used for pathogenic organisms. This latter medium being firm and also transparent, the successive cultivations can be controlled with the microscope, and only those used which remain free from impurity. The photographs have not been retouched, and, being thus absolutely trustworthy, add very largely to the value of the work. They present the organisms of erysipelas, endocarditis ulcerosa, anthrax, of decomposition in its numerous forms, of septicæmia, typhoid, pneumonia, and other forms occurring both in man and animals. Fourteen photolithographed plates accompany the essay.

JAMES ANDERSON, M.D.

2. Hart on the Formation of Fibrin.—By means of Dr. Norris's method of isolation, by subsequent fixing of the blood corpuscles (human and rabbit) on the cover-glass by the vapours of a two per cent. solution of osmic acid, and further by staining them with a concentrated solution (in alcohol) of nitrate of rosaniline, Mrs. Ernest Hart (*Quarterly Jour. of Microsc. Science*, July 1882) observed a peculiar change to take place in those red blood-corpuscles, which, in the process of manipulation, have lost their hæmoglobin, and which, therefore, represent the pale corpuscles of Dr. Norris. This change consists in the production of numerous finer or thicker, longer or shorter, branched or unbranched, filaments from, and at the expense of, the decolorised blood-corpuscles. These fibrils look like fibrin-fibrils, and their formation appears independent of currents in the fluid preparation. The appearances are not obtained if defibrinated blood (rabbit) is used. [Landois, in *Centrabl. für die Med. Wiss.*, 1874, describes the formation of threads, but after an entirely different method from the red blood-corpuscles; these threads he considered to be fibrin, but different from the fibrin formed in blood plasma.—*Rep.*]

E. KLEIN.

3. Langovoi on Multiple Cirrhosis of the Kidneys, Liver, Lungs, etc.—While carrying his researches upon primary cirrhosis of kidney in Professor Ostroumoff's clinic in Moscow, Dr. Langovoi (*Med. Obozr.*, Jan. 1882) met with a series of cases in which, side by side with the affection of the kidneys, there existed similar changes of the heart, liver, lungs, spleen, peritoneum, etc. The author gives a detailed clinical account of four such cases, adding some interesting results of the *post mortem* examination. The microscope revealed very exten-

sive and profound alterations in the vessels of all organs investigated. They were these—1. Endarteritis obliterans, which either completely closed, or only considerably narrowed the lumen of the vessel; 2. Mesoarteritis, shown by an immense thickening of the muscular coat of the artery; and 3. Periarthritis, with hypertrophy of the adventitia, and formation of dense connective tissue radiating from the vessel in all directions. Besides these vascular changes, the kidney showed great increase of connective tissue, obliteration of the glomeruli, granular disintegration of the epithelium of the tubuli contorti; the liver, intense proliferation of the interlobular connective tissue; the uterus, hypertrophy of the fibrous tissue and atrophy of muscular fibres; the ovaries, cirrhosis, with atrophy of follicles; the spleen, enormous thickening of the trabeculae, and an infarct, with a central vessel containing the organised thrombus; the submaxillary glands, hyperplasia of the connective tissue; the heart, very pronounced increase of connective tissue, and atrophy of the muscular elements, both in the papillary muscles and in the walls; the lungs, compression and narrowing of the alveoli, with great hypertrophy and leucocytic infiltration of the interstitial tissue. Discussing the question whether all those changes simultaneously affecting the organs of all kinds are only accidentally coincident, or produced by a common exciting cause, the author follows the teaching of Sir W. Gull and Dr. Sutton, and attributes the development of multiple cirrhosis of the viscera to primary arterio-capillary fibrosis. He found considerable vascular fibrosis, even where the changes of connective tissue in an organ were only slight and incipient. In his opinion, the decrease of blood-supply, resulting from the before-mentioned vascular alterations, necessarily leads to proliferation of connective tissue in the organs affected. There is as yet no experimental proof of this supposition (the author rejects Lewinski's experiments, see LONDON MEDICAL RECORD, Aug. 1880, as untrustworthy), but morbid anatomy supplies many facts in support of it; and the author quotes Martin's case, in which sclerosis of the posterior columns of the spinal cord was found exclusively within the region of vascular changes in the pia mater, while the parts of the spinal cord covered with healthy pia mater presented no morbid alterations.

4. Vargunin on the Artificial Production of Tuberculosis by Inhalation.—In the LONDON MEDICAL RECORD, May 1879, pp. 189-190, and October 1881, p. 422, there are to be found reports of Tapeiner's experiments on dogs, in which tuberculosis was invariably produced by means of inhalation of phthisical sputa. While Berteau, Lippl, and Reinstadter, by their own researches, fully endorsed Tapeiner's statements, Schottelius, after having repeated the same experiments, succeeded in producing only disseminated catarrhal pneumonic foci, but no tubercles. In addition, he found that the inhalation of atomised cheese and brain-substance furnished exactly the same results as that of phthisical sputa. Such a conflict of evidence led Dr. Vargunin (*Vratch*, 1882, No. 6) to undertake an investigation of the matter. He experimented on sixteen dogs, seven of which were made to inhale atomised phthisical sputa, one muco-purulent bronchitic expectoration from an emphysematous patient, four atomised mixture of Swiss cheese with water. Three dogs inhaled carbolised (2 per cent.) and boiled sputa, and one pulverised mixture of wheat-flour with water. All the cases furnished strictly identical results. In all

animals alike there was developed simple disseminated bronchopneumonia, caused by introduction of organic particles into the lungs, whether expectoration of a phthisical patient, or that of a bronchitic one, sputa fresh from the lung, or previously disinfected cheese or flour. Neither *post mortem* changes, nor the course of the disease, indicated that inhalation of phthisical sputa produced an infectious disease. Such was the general conclusion at which the author arrived. At the same time, he points out that the results furnished by inhalation of sputa in dogs fully support the now more and more spreading opinion (Weber, Fraentzel, Manassëin, Eichwald, and others), that prolonged breathing of the air impregnated by phthisical expectorations, is injurious to the health of persons nursing consumptive patients.

5. *Tarenezky on Cyclopia in Man.*—Dr. A. Tarenezky of St. Petersburg publishes in the *Mediz. Bibliotheca*, April 1882, a very valuable and interesting paper on the anatomy and evolution of a typical monstrosity *per defectum*, called *cyclopia vel polyphemia v. synophthalmia v. monophthalmia cyclopica*, and characterised by the presence of a single orbit, which is situated on the median line, and encloses one developed eye, to which there are attached some rudiments of the other. The paper is based on careful and detailed examination of ten specimens of human cyclops, and on careful study of all cases scattered in the literature. The author refers to seventy-one papers on this subject, nine of them being English or American. The majority of cyclopes are born either at full term or not earlier than the sixth month of pregnancy. They are born dead, or die usually within a few minutes after delivery, seldom within a few hours. Caradec and Schön, however, reported three cases in which cyclopes lived eight and nine days, and ten years. As to the sex of Dr. Tarenezky's nine cases (in the tenth the head alone was preserved), six were male and three female; but of thirty-eight cases of other authors, twenty-seven were female and only eleven male. Hence almost two-thirds of all cyclopic cases are met with in girls. The rest of the body is mostly developed quite normally. Of co-existent deformities, there are most often mentioned numerical defects of fingers and toes; then pes valgus and varus, and various visceral anomalies. A study of the anatomical changes leads the author to the conclusion that cyclopia is the result of a pathological process affecting synchronously all the anatomical parts of the anterior end of the foetal head; while other authors attribute the deformity under consideration to morbid alterations of some one organ,—of the encephalon alone, or of the eye, etc. The author shows that cyclopic changes probably develop under the influence (1) of pressure produced on the frontal part of the primordial skull, and the anterior brain-bladder, by the narrowed amniotic 'skull-cap', and (2) of an inflammatory process affecting the meninges, cranial and facial bones, etc. All those changes which transform a normal human embryo into a cyclopic one, take place gradually during the second and third weeks of foetal life.

V. IDELSON, M.D.

6. *Regne on the Hæmatic Crises in Acute Diseases, with Sudden Deferescence.*—In this thesis (Paris 1881) M. Regne has done for the pathological physiology of the blood the same as M. Cadet has effected for the normal physiology of that fluid. M. Regne has, in the first instance, discovered that inanition in a fasting dog increases the number of red

corpuscles in the cubic millimètre of blood; this simply signifies that the spoliation of the water and of the serum of the blood is the cause of the blood-corpuscles being found in larger proportion. The hæmatoblasts, on the contrary, have decreased by more than one half at the end of sixteen days. The richness of the blood in hæmoglobine does not vary at all at first in inanition, but diminishes rapidly at the latter period. In the human subject in the normal condition there is one hæmatoblast to twenty red corpuscles. In acute diseases, with sudden deferescence, the relation changes at the approach of the crisis, and undergoes remarkable oscillations. If the curve of these diurnal variations be traced in the course of a fever, it will be seen that, towards the termination of the febrile period, there is a minimum of red corpuscles, but that at this time the number of hæmatoblasts increases greatly, and with extreme rapidity, so as frequently to triplicate the normal quality in a few days. In pneumonia and erysipelas of the face, especially, there is one hæmatoblast to eight, seven, or six red corpuscles; the latter number is almost constant in pneumonia. This rapid increase of the hæmatoblasts is followed by a prompt diminution, and thus constitutes a true 'hæmatic crisis'. In proportion to the diminution of the hæmatoblasts, the red corpuscles, which are probably produced by them, increase rapidly, and that according to the rapidity with which the process of repair takes place. In fact, these phenomena of the repair of the blood follow the same course as the thermic crisis, and, in proportion as the temperature returns to the normal condition, the number of the red corpuscles continues to increase. It is to this repair, consecutive on hæmorrhage, much more than to inanition, that the hæmatic crisis of febrile diseases must be compared. After hæmorrhage, in fact, there is a very rapid growth of hæmatoblasts, and, after this crop, their number diminishes quickly, and, at the same time, the number of red corpuscles regains the normal standard. It must then be admitted that, in febrile diseases, there is destruction of the figurate elements of the blood, and repair by means of hæmatoblasts, which, after having multiplied themselves, are soon transformed into red corpuscles.

7. *Déjérine on Gangrene of Nervous Origin.*—M. Déjérine (*Le Prog. Méd.*, 1882, No. 6) has studied the changes in the nerves in sloughs depending on changes in the central nervous system. He has examined, one hour after death, portions of skin affected with gangrene from a case of cerebral hæmorrhage, and from one of sclerosis in patches. He found parenchymatous neuritis affecting all the nerve tubes, both near the slough, and as far up as 7 or 8 centimètres from it.

8. *Roth on Malformations in the Region of the Ductus Omphalo-Mesentericus.*—Roth (Virchow's *Archiv*, Band lxxxvi) divides congenital intestinal cysts into two classes: 1. such as have occurred by the sealing-up of the originally normally-placed gut in several places, and which, because of the complete obstruction, always have a fatal issue; 2. such as are the result of abnormal development in early stages of foetal life. These last he subdivides into: *a*, those in which the cystic parts originated in a rudimentary twin; *b*, those in which they appear as a regular hypertrophy of organic parts in combination with other processes of like nature; *c*, those which develop as simple entero-cystomata from abnormal lateral appendages, most frequently from the diverticulum of Meckel. The author then relates two

cases of cystic diverticula ilei, and one of so-called 'patent diverticulum'. The first case was that of a male child, aged 1 year and 4 months, in which gangrene and peritonitis had followed torsion of the pedicle. A narrow opening was found to lead from the cyst into the ileum, the former being about the size of an apple, and showing intestinal structure on its wall. In Case 2, that of a boy who died after birth, cysts were found in the mesentery and in the posterior mediastinum, all showing intestinal structure. Case 3, observed six months during life, was that of a boy; *post mortem* examination revealed a patent prolapsed Meckel's diverticulum.

F. WILLIAM ELSNER.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. POLK.—Landmarks in the Operation of Laparo-Elytrotomy. (*New York Med. Jour. and Obstet. Rev.*, May.)

2. ENGELMANN.—Diagnostic and Operative Difficulties in Ovariectomy. (*Amer. Jour. of Med. Sciences*, April.)

3. SOLOVIOFF, A. N.—On Extirpation of the Cancerous Uterus. (*Mediz. Obozr.*, Jan. 1882, pp. 109-116.)

4. HUZARSKI, S.—On Iodoform in Gynæcological Practice. (*Gaz. Lekarska*, 1882, No. 2.)

5. KRASINA, T. M.—Absolute Obstruction to Labour, caused by Foetal Ascites. (*Vratch*, 1882, No. 6, pp. 92-93.)

1. *Polk on Landmarks in the Operation of Laparo-Elytrotomy.*—Dr. William M. Polk, Professor of Obstetrics in the University Medical College, New York, recently demonstrated certain anatomical points bearing upon the operation of laparo-elytrotomy, before the New York Obstetrical Society (*New York Med. Jour. and Obstet. Rev.*, May). The specimen shown, taken from the body of a woman who had been murdered in the seventh month of pregnancy, was a dissection showing the relations of the pelvic contents during the latter part of gestation, and especially the course of the ureter. Practising the operation upon this and other bodies, the author has found that the ureters do not follow the pelvic wall to a point near the ischial spine, as in the non-pregnant condition, but that, crossing the pelvic brim at the common iliac bifurcation, the left just behind, the right just in front of that point, they descend into the canal to the brim of the bony pelvis, the point being about the synchondrosis. In this course they accompany the internal iliac artery, the right in front of the vessel, the left crossing it obliquely. Reaching the bony brim (the ilio-pectineal line), they leave the pelvic wall, emerging from beneath the base of the broad ligaments (in pregnancy about on a level with the pelvic brim, and carried back on a line with the synchondrosis), and take a course downward, forward, and somewhat inward, passing about midway between the pelvic wall and the cervico-vaginal junction, but approaching very closely the antero-lateral wall of the vagina, as they turn more decidedly inward, on a lower plane, to strike the base of the bladder three-quarters of an inch below the cervix, terminating in the bladder at a point (the subject being on the back) just two inches below the spine of the pubes. A line drawn from the bifurcation of the common iliac to the spine of the pubic bone

corresponds in the main to the line of the ureters. Along this line they have the following relations to the pelvic brim (in the recent state). At the bifurcation, half an inch below, at the extremities of the transverse diameter of the pelvis, about an inch; and at the spine of the pubic bone, two inches below. As a whole, the tubes in the pelvis are situated upon a higher plane than in the non-pregnant condition, having been carried slightly upward while being separated from their close relations with the pelvic wall by the ascending uterus. How far they may be elevated in a case of extreme pelvic deformity with a pendulous abdomen, and the uterus correspondingly displaced, the author is unable to say; but he thinks it probable that, the bladder being empty and not dragged upward, thus preserving the normal position of the vesical end of the tubes, the displacement would not be such as to bring any part of them much above the points indicated. Dr. Polk has also investigated the ground of the objection to operating upon the left side. In view of the strong probability that the operation can be done on the same side but once, this, he remarks, is a very important question. He did the operation upon the left side, the vessels being injected with plaster and the rectum distended. He found that the rectum offered no such obstacle as is commonly supposed, and that the operation was as feasible upon one side as upon the other. After the operation the organ was carefully examined, and found in no way disturbed. In looking at its position, this was readily accounted for; it lies behind the broad ligament. In entering and leaving the pelvic canal, the brim between the base of the broad ligament and the posterior surface of the bladder is crossed. This latter is about on a line with the ilio-pectineal eminence, while the former is as far back as the synchondrosis; here is ample space for manipulation and extraction. The important structures that Dr. Polk regards as most likely to suffer are the vessels going to the uterus through the broad ligaments. These, by being stretched and dragged upon in extraction, might be torn if the sides of the incision were not carefully supported in cases requiring powerful traction.

2. *Engelmann on Diagnostic and Operative Difficulties in Ovariectomy.*—Professor Engelmann of St. Louis contributes an able paper with the above title to the April number of the *American Jour. of the Med. Sciences*, with the account of two cases. He emphasises the following points as of practical importance in securing successful results. 1. Enter the peritoneum at the upper angle of the abdominal incision, mindful of the safety of an enlarged bladder. 2. Endeavour to secure deep and firm union of the abdominal incision by carefully and closely placed sutures during the operation, and proper support for months after. 3. Tie all bleeding points, use the finest braided silk, cut short, and drop at once. 4. Avoid routine Listerism, and especially the carbolic acid spray over the hands of the operator and into the abdominal cavity. Cleanliness, not carbolic acid, is necessary. Keep the sponges clean and warm, but not carbolised; avoid carbolic acid about the peritoneum and open surfaces. Ligatures, sutures, and instruments should be clean, but not carbolised. 5. Late operations are the scourge of surgeon and patient. If an operation be indicated, operate early, as the patient's chances decrease with the growth of the tumour and the failing of health.

3. *Solovioff on Extirpation of the Cancerous Uterus.*—Dr. A. N. Solovioff of Moscow records

(*Mediz. Obozr.*, Jan. 1882) his third case of extirpation of the uterus for carcinoma of the cervix, in a patient aged 53. The operation was performed through the vagina. The uterus having been brought down by means of Museux's forceps, the cervix was separated from the surrounding parts, and then Douglas's pouch was laid open. The anterior peritoneal *cul-de-sac* was not opened; the operator cut off, by means of scissors, the whole of the mucous membrane and the greater part of the muscular wall, leaving a thin stratum of the latter, with the serous covering *in situ*. The broad ligaments were then divided, some vessels were tied, and a drainage-apparatus (four Nélaton's flexible catheters sewed together) was introduced into the opening in Douglas's pouch. On the seventh day after the operation, the drainage-tube was removed. On the fifteenth day, the patient was up. Her recovery was rather slow. This is the second time the author has operated through the vagina, which method he prefers to the high (or laparotomic) operation, finding the low extirpation technically easier and less liable to such complications as shock, or accidental wounding of the bladder or ureters. The high operation he regards as indicated only when the uterus is too large to be removed through the posterior or anterior peritoneal *cul-de-sac*, or when there exist adhesions of the womb and degeneration of lymphatic glands (*Mediz. Obozr.*, Oct. 1881, p. 516). The author gives the reasons which led him to perform total extirpation of the womb, though the cervix alone was affected. The researches of Drs. Ruge and Veit have shown that in cases of cervical cancer the epithelium of the body of the uterus also degenerates very early. Microscopic examination of the mucous membrane of the body of the organ in the author's case fully confirmed the statement of Ruge and Veit. Dr. Solovioff belongs to the most ardent advocates of Freund's operation, and even holds that total extirpation of the uterus is the only rational procedure in the treatment of uterine cancer. [This is the sixth case of Freund's operation performed in Russia. Dr. Levenstein of Moscow operated twice, with two deaths (LONDON MEDICAL RECORD, Dec. 1880, p. 496); Dr. Solovioff three times, with one death; and Dr. N. J. Bogoluboff of Kazan once; the patient recovered (*Vratch*, 1881, Nos. 48 and 49). Probably the brilliant results lately published by Dr. Bardenhever of Stuttgart (*Die Drainirung der Peritoneal Höhle*, Stuttgart, 1881), who operated twelve times, with eleven recoveries, will encourage Russian surgeons to perform Freund's operation more often than they have hitherto done.—*Rep.*]

4. HUZARSKI on Iodoform in Gynecological Practice.—Dr. S. Huzarski (*Gaz. Lekars.*, 1882, No. 2) successfully treated pelvic cellulitis, parametritis, and perimetritis, by introducing into the vagina iodoform suppositories (5 grains to half a drachm of cacao-butter). A suppository was left for twelve hours, being kept *in situ* by means of a small cotton-wool tampon; then a disinfecting vaginal douche was administered, and a new suppository introduced. Iodoform invariably diminished pain, and favoured absorption of the inflammatory deposits. The author never saw any untoward general symptoms, even after one to three months' use of the remedy. [Dr. Kisch thinks similarly of iodoform treatment in such cases. See LONDON MEDICAL RECORD, March 1880, p. 111.—*Rep.*]

5. KRASINA on Fatal Ascites as a Cause of Insurmountable Obstruction in a Case of Labour.—

Mrs. T. M. Krasina of Orel (*Vratch*, 1882, No. 6) details the case of a pluripara, in which the enormous enlargement of the foetal abdomen proved to be an insurmountable obstruction to labour. When called to the patient, she learnt that the head and upper extremities had been expelled some hours before, after which the delivery stopped. The uterus was tetanically contracted; the child dead. Access to the child's abdomen being extremely difficult, the author removed the head (already almost torn away by a midwife's energetic attempts at extraction), and both arms, and then introduced the trocar behind the symphysis. After puncture, the labour was easily accomplished, having lasted nineteen hours. The profuse hæmorrhage which followed the extraction of the child immediately stopped after manual removal of the very large placenta. The abdominal cavity of the fœtus contained at least six pints of fluid. Dr. Krasina points out the exceeding rarity of such enormous ascitic accumulations in the fœtus, requiring operative interference. She quotes Dr. Muratoff's statistics, who (*Moscow Inaugural Dissertation*, 1879) collected 41,000 cases of labour admitted into the Moscow Lying-In Hospitals, and did not find a single similar instance. V. IDELSON, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. PARROT.—Dislocation of the Cranial Bones in the Meningitis of Children. (*Rev. de Méd.*, Feb. 1882.)
2. UNRUH.—The Pathology of Diphtheria. (*Jahrb. für Kinderheilk.*, vol. xvii, Parts 3 and 4.)
3. POTT.—Experiments on Vaccination with Aseptic Vaccine Lymph. (*Ibid.*)
4. BOKAI.—Record of Cases of Retropharyngeal Abscess. (*Ibid.*)
5. LINDNER.—The Treatment of Recent Empyema in Children. (*Ibid.*)
6. WINCKEL.—On the Use of Prolonged Baths for the New-Born. (*Centralbl. für Gynäkol.*, 1882.)
7. CARMICHAEL.—Some of the Sequelæ of Acute Infectious Diseases in Children. (*Edinburgh Med. Jour.*, Jan. 1882.)
8. DAY.—Headaches in Children. (A paper read before the Harveian Society, Feb. 2, 1882.)
9. SMITH, EUSTACE.—On Renal Calculus in Children. (*Lancet*, Feb. 18.)
10. TROITZKY.—Calculus of the Bladder in an Infant. (*Vratch*, No. 37, 1881; *Centralbl. für Chir.*, No. 47, 1881.)
11. LESENEVICH, B.—On a Case of Chorea et Vermibus. (*Vracheb. Vedom.*, No. 4, 1882, p. 2951.)
12. CAMPA.—Enterocolitis Consecutive on Scarlatina. (*Revista de Ciencias Med.*, No. 3, 1882.)
13. DURAND.—Treatment of Infantile Purulent Pleurisy.
14. MARTIN.—Vaccina Transmitted from Mother to Infant.
15. ELLIOTT.—The Feeding of Infants. (*Practitioner*, June 1881.)
16. GREULT.—Hot-Water in the Asphyxia of New-Born Infants. (*Jour. de Méd. de Paris*, 1882, No. 11.)
17. LAWRENCE, H. C.—Narcotism in Infancy. (*Practitioner*, May 1882.)

CLINICAL RECORDS OF CHILDREN'S DISEASES.

Case of Paralysis of Left Fifth and Seventh Nerves in a Child aged 3 years, with Atrophy of Left Eye: exhibited at Cambridge Medical Society: symptoms commenced at age of 7 months: no history of syphilis: cornea opaque and insensible to touch: anæsthesia of left side of face,

nose, supra-orbital region, and inside of mouth: teeth on left side absent or decayed: paralysis of left orbicularis palpebrarum and facial muscles: discharge from left ear: disease supposed to be located in course of fifth nerve, anterior to Gasserian ganglion, and adjacent part of temporal bone, involving seventh nerve. Mr. Wherry. (*Brit. Med. Jour.*, Jan. 7, 1882.)

Round-Cellled Sarcoma of Right Kidney: girl, aged $2\frac{1}{2}$ years: forming a tumour of about the dimensions of a foetal head. Dr. Donkin, East London Hospital for Children. (*Ibid.*, Feb. 4.)

Spina Bifida: spontaneous cure: at birth, three inches in diameter: at 3 months old, five inches in diameter and flat, projecting only one inch and a half from the surface, and very tense: at 6 months, began spontaneously to diminish in size, and at 10 months had entirely disappeared: at 16 months, only an indurated cicatrix to be seen, the bones having completely ossified. Dr. Lithgow. (*Ibid.*, Feb. 11.)

An Anomalous Case of Infantile Paralysis. Dr. Haddon. (*Ibid.*, Feb. 18.)

Hysterical Paraplegia in a Boy aged 12 years: previously suffered from incontinence of urine: sudden onset of paraplegia: no pain nor convulsion: complete anaesthesia from level of patella to roots of toes, with sharply defined limits: plantar, patellar, tendon, and cremasteric reflexes normal: no ankle-clonus: complete loss of voluntary power: no nocturnal incontinence after onset of paraplegia: recovery of sensation in two days, and of power of movement in a fortnight. Dr. C. Allbutt. (*Ibid.*, Feb. 25.)

Hæmaturia and Subsequent Passage of Urea and Calculi of size of pin's head: boy aged 6. Dr. E. Smith, East London Hospital for Children. (*Med. Press and Circ.*, Jan. 25.)

Cerebral Abscess in Girl aged 12 years: symptoms dated from injury to head, and were only headache and vomiting: pulse, respiration, temperature, pupils normal: six weeks after injury drowsiness set in, passing into coma, with twitchings of extremities: two ounces of pus removed by trephining: subsequent death: *post mortem*, the abscess was seen to be of size of small orange, occupying the right anterior cerebral lobe, reaching backwards nearly to lateral ventricle and basal ganglion, which was not involved: bounded by a tough impervious capsule, perforated by the cannula after trephining: grey matter of convulsions not destroyed, but at places separated from the abscess wall by a very thin layer of white matter. Mr. G. Lawson, Middlesex Hospital. (*Ibid.*, March 8.)

Case of Early Menstruation, commencing at age of 5 years and 9 months, recurring at intervals of three to six weeks: mammae and genitals well developed. Mr. Berry. (*Ibid.*)

Cases Illustrating the Use of the Internal Administration of Sulphide of Calcium in doses of 1-10th gr. to 1-4th gr. in Strumous Ophthalmia. Mr. S. Snell. (*Practitioner*, Jan. 1882.)

Series of Cases Illustrating Defective Developmental Conditions in Children. Dr. F. Warner, East London Hospital for Children. (*Med. Times and Gaz.*, Jan. 21, 28, Feb. 11.)

A Halfpenny Swallowed by a Boy aged 5 years, and Vomited Five Weeks after: epigastric pain, vomiting, and loss of flesh in the interval: subsequent recovery. Mr. Jenkins, Oxford. (*Ibid.*, Feb. 11.)

Case of Congenital Umbilical Tumour in an Infant 6 weeks old: consisting of a hernia-like protrusion of skin, three quarters of an inch in length, surmounted by a red fleshy outgrowth through a hole in which urine flowed, indicating a patent urachus: tumour transfixed and strangulated with ligatures: complete recovery. Dr. French. (*Lancet*, Jan. 14.)

Disease of the Knee in a Girl aged $2\frac{1}{4}$ Years, with Necrosis of nearly Entire Shaft of Femur: excision of joint, with removal of sequestrum: complete recovery. Mr. Bryant, Guy's Hospital. (*Ibid.*, Jan. 28.)

Hydrocele of Right Side of Neck: commencing in a girl at age of 5 months, attaining a large size: evacuated successfully. Dr. Whitson. (*Ibid.*, Feb. 18.)

1. *Parrot on Dislocation of the Cranial Bones in the Meningitis of Children.*—Professor Parrot, in a communication to the February number of the *Revue de Médecine*, draws attention to a cranial lesion of which he has not hitherto seen mention, although he does not consider it to be of rare occurrence. After the removal of the scalp, the cranial bones may be seen separated by a sanguineous fluid between their margins. The disunion attains its greatest size at the summit of the coronal and sagittal sutures, where it may amount to 3 or 4 millimètres. This condition is, doubtless, due to a sudden increase in volume of the cranial contents, resulting from inflammatory or serous exudation, producing œdema of the brain, or hydrocephalus. Another indispensable condition of the separation is the rapid development of cerebro-meningeal lesions. The cases in which this condition has been observed have reached an age when the different bones of the cranial vault are no longer separated by membrane, but where the sutures have not acquired the compactness they afterwards attain. In this intermediate condition, between the absolute resistance of the adult skull, and the elasticity of the membranous sutures of the newly born, a sudden and powerful distension from within ruptures the fibro-vascular cords which bind the bones together. This cranial dislocation does not appear to give rise to any trouble during life.

2. *Unruh on the Pathology of Diphtheria.*—From an experience of seventy-five cases of diphtheria, the majority of which occurred in children between two and nine years, Dr. Unruh comes to the conclusion that diphtheria is a contagious infectious disease, which, in a number of cases, runs its course as a local affection, and, in a number of cases, from the local lesion passes into a general infection. Although the author regards this statement to be tolerably certain, he nevertheless admits that it has yet been of but slight practical value, owing to the want of a positive indication when the local affection ceases to be simply local, and when it becomes a general disease. Excluding the severest cases, which are struck down at once, the majority give no absolute indication where the local affection ends, and the infection begins. Yet definite information on this point is of the greatest importance, for a better knowledge of the disease, as well as for the prognosis and treatment of individual cases. It is impossible to judge from the extent and character of the fever whether we have to deal with a purely local or with a general condition; for cases of simple anginous catarrh, wholly local in nature, are of frequent occurrence where the fever is intense, showing that we must not assume, from the existence of a high temperature, the presence of a general infectious disease; and, on the other hand, a true infection is not contradicted in the absence of a high temperature. In addition, the course of the temperature in diphtheria is so variable that it is of doubtful value in determining this question. Nor can the coincident affection of the lymphatic glands, which invariably occurs in diphtheria, be taken as conclusive on this point, since identical glandular lesions occur in typically local affections. Recognising the uncertainty of these signs, in determining the real nature of diphtheria, the author is inclined to put more value on the occurrence of albuminuria, which he considers to be the first and only absolutely sure sign of the existence of the general infection, and that it is wanting in no cases where, on other grounds, we are able to recognise the existence of the general infection, which

condition may be excluded when albuminuria is not present. Hence, Dr. Unruh advises a daily examination of the urine from the very first; and he is of opinion that the great discrepancy among authors, as to the frequency of albuminuria in diphtheria (these differences varying from 10 to 66 per cent.), is due to the want of this precaution; since often no analysis is made unless there be anasarca, and many cases with albuminuria are known to run their course without any œdema. Out of fifty-three cases, carefully observed by the writer, 16 or 30 per cent. manifested albuminuria; but, without placing too much importance on these figures, they suffice to show the frequent occurrence of the complication. In attempting to determine the more important question, when the albuminuria begins, how long can the local affection last before the albuminuria sets in, and how far the duration of the local lesion affects the existence of the albuminuria, too much stress has been laid upon the intensity of the throat-condition, rather than on the periodic relationship of these two factors of the disease.

3. Pott on Vaccination with Aseptic Lymph.—

The conclusions arrived at by Dr. Richard Pott, confirm the results previously obtained in respect to the protective power of aseptic lymph being in no wise diminished. Köhler and Kobert, in 1878, recommended thymolised lymph, in the proportion of two or three parts of a 1 per cent. aqueous solution of thymol, to one part of lymph. Dr. Pott's experiments were made with watery solutions of salicylic, boracic, and carbolic acids; the last in varying strengths, from 1 to 4 per cent., and always without diminishing the protective power of the lymph. Mixed with a 5 per cent. solution of carbolic acid, however, the lymph appeared to be quite inoperative, no vaccination-pustules following its introduction. He further suggests that the aseptic material may destroy any erysipelatos poison the lymph might contain, as well as producing a lymph that may be kept good for years.

5. Lindner on Recent Empyema in Children.—

Lindner is a warm supporter of the plan of treatment of recent empyema in children by free incision rather than by aspiration. In setting forth the relative merits of these two methods, he admits that there may not be a sufficient number of cases to form a perfectly conclusive opinion, this state of things being very much due to the suppression of unfavourable cases by the supporters of each view. The points for comparison between the two plans are the severity and complexity of the operations, and mortality, as well as the duration of the subsequent period of recovery; and the author is distinctly of opinion that the radical operation of incision is not so unfavourable on these heads as has been affirmed. So far as recorded cases go, recovery in those treated by aspiration has been as long delayed as where free openings have been made. The frequent necessity for repetition of paracentesis, and the daily need for examination of the chest, to ascertain how far the pus may have accumulated, render this operation, on the whole, quite as tedious as the other, whilst decomposition of the contents of an empyema, which may follow aspiration, imperatively demands free incision, that the pleura may be washed out. Elevation of temperature, and the febrile state, rarely follows incision, as it frequently does aspiration, necessitating its repetition. The writer does not attribute much force to the objection urged against incision, that it substitutes a positive, and therefore harmful pressure of a pneumo-thorax on the lung for the negative, and

consequently advantageous, pressure of aspiration. The larger opening also permits the complete evacuation of the coagulated lymph, which, if retained, is liable to become cheesy, and a source of mischief. The operation itself must be performed with strictly antiseptic precautions. The pus should be allowed to escape slowly. There is no specially favourable site for the incision, and the author does not favour resection of a portion of the rib. Chloroform may be given to older children for dividing the integuments; but is otherwise unnecessary, and a counter-opening is requisite when decomposition has necessitated the washing out of the chest. In those cases where the empyema has communicated with the lung, the operation should be delayed, since recovery frequently occurs without it.

7. Carmichael on Some of the Sequelæ of Acute Infectious Diseases in Children.—

Dr. Carmichael, in a paper read at the Medico-Chirurgical Society of Edinburgh, reminds us how frequently the chronic ill-health of children is to be attributed to a previous acute infectious disease, especially measles, whooping-cough, or scarlatina. It is especially the organs concerned in the nutrition of the growing child that suffer, with the result of producing a general debility frequently associated with a hyperplasia of the lymphatic glands, bronchial, or mesenteric. Among the other sequelæ are nasal catarrh, certain gastro-intestinal affections, and cutaneous eruptions, chiefly of a chronic pustular character. In the absence of special constitutional taint, these affections usually yield to tonics, good feeding, and proper hygienic conditions.

9. Smith on Renal Calculus in Children.—

The occurrence of renal calculus in children, Dr. Eustace Smith thinks to be more frequent than is usually supposed. Uric acid is the commonest constituent of the concretion. This proteid derivative is often excreted in excessive quantity; an apparent increase in the amount being due to a diminished secretion of water, or an increased acidity of the urine, whilst a real excess frequently results from large quantities of food or increased tissue-metabolism. This tendency to lithic acid formation may be hereditary, as in the gouty diathesis, and all conditions that interfere with the assimilative processes tend to a precipitation of uric acid in some part of the urinary apparatus, either as infarctions in the tubules of the pyramids, or in the pelvis of the kidney. Besides uric acid, oxalate of lime concretions are not uncommon in children; and sometimes small calculi of urate of ammonia or soda, occasionally a nucleus of uric acid, may be encrusted with urates or phosphates, the latter indicating the existence of vesical irritation. Urine that may be thick from lithates is passed without any distress to the child; but excess of uric acid determines frequency of micturition, signs of pain in the urethra, and very often nocturnal incontinence, whilst the passage of the sharp crystals along the renal tubules is a frequent cause of hæmaturia. Indeed, this latter symptom in children is usually to be attributed to the cause under consideration. Examination of the urine in these cases often gives a negative result. Calculus may exist in the kidney without giving rise to symptoms of any kind. Between the attacks of hæmaturia, the urine may contain neither blood nor albumen, and, unless uric acid be actually passing, it may redden litmus paper but faintly. Sometimes the irritation produced by the presence of the calculus in the pelvis of the kidney may set up pyelitis, the stone then usually becoming enlarged

by deposition of phosphates upon its surface. The passage of the concretion along the ureter seems to be attended with less pain than in the adult, though serious consequences will follow its impaction, such as contraction of the passage, and even hydronephrosis. Whilst it is far from uncommon for children to pass quantities of uric acid sand, a coincident hæmaturia is by no means so frequent; and this seems due to the fact that the acid is commonly deposited from the urine in the bladder itself, and not at a higher point in the urinary tract. In the case of children, it may be laid down as a rule, that renal hæmorrhage, occurring in a child otherwise healthy, and accompanied by no symptoms or by hæmorrhage from other parts of the body, is in the majority of cases to be attributed to the irritation of crystalline masses in the tubules, calyces, or pelvis of the kidney. Where there is evident disposition to excessive formation of uric acid, the diet should be light and plain, and the meat and farinaceous constituents carefully proportioned to the digestive powers; alkalis should be given, and, if there be hæmorrhage, perfect rest in bed enjoined. Styptics are rarely required.

W. H. ALLCHIN, M.B.

10. *Troitzky on a Calculus of the Bladder in an Infant.*—Dr. J. W. Troitzky relates, in *Vratsch.*, No. 37, 1881 (*Centralbl. für Chir.*, No. 47, 1881), the case of a child one month old, which was brought to him with the following history. In other respects perfectly healthy, it cried loudly, about twice a week, on attempting to pass urine. The mother accidentally discovered that the flow of urine became free, and the child was relieved, when she held its pelvis and feet higher than the head. It first cried during micturition when it was eight days old. Twenty-four hours before Dr. Troitzky saw the child, the difficulty had returned, and could not be removed by the usual manoeuvre; the flow of urine was quite arrested. The bladder was distended with urine, and a calculus was detected in the urethra, about the middle of the penis. All attempts to remove it were fruitless. Dr. Troitzky then injected a few drops of almond-oil into the urethra, and easily pressed the stone towards the orifice; after the dilatation of which, the calculus was removed. It weighed a quarter of a gramme (nearly four grains), was eight millimètres long and four wide, and consisted of urates arranged in layers. The urine contained an abundance of crystals of uric acid and urates. The formation of the calculus must have commenced during intra-uterine life. The child's parents were healthy; the grandfather on the father's side had suffered from calculus.

A. HENRY, M.D.

11. *Lesenevich on a Case of Chorea due to Ascarides.*—Dr. Lesenevich (*Vracheb. Vedom.*, 1882, No. 4) records an interesting case of so-called sympathetic chorea (*chorea e vermicibus*), in a weak, delicate boy, aged 11, with feebly developed muscles and pale integuments, who, a month ago, began to complain against abdominal pains and occasional startings in the hands and feet. Later, there were gradually developed true choreic movements, which came in paroxysms of two or three minutes' duration about sixty times during the day. At night, the boy was quite quiet. Each paroxysm was ushered by slight giddiness and was followed by a deep sigh and feeling of fatigue. The administration of two full doses of santonine, having expelled twelve round ascarides (*ascaris lumbricoides*), at once stopped all choreic symptoms. [Another interesting instance of 'worm' neurosis—Dr. Reckett's case of torticollis

due to *oxyuris vermicularis*, is to be found in the LONDON MEDICAL RECORD, June 1880, p. 233.—*Rep.*]
V. IDELSON, M.D.

12. *Campa on Entero-Colitis consecutive on Scarlatina.*—Dr. Campa of Valencia observed an epidemic of scarlatina in April and May last (*Revista de Ciencias Medicas*, No. 3, 1882), in the course of which he noticed frequent complications. At the commencement of his paper, he remarks that intestinal inflammation during scarlatina is rare in children a year old. However, in the cases of scarlatina which he observed at the latter period of the epidemic, intestinal complications were frequent, very serious, and fatal in children of four, five, and even six years of age. The symptoms took the following course. There was diarrhoea during the course of the scarlatina; then, after the disappearance of traces of the infectious disease, there were pains in the bowels; the tongue was dry and burning, red at the edges, and white at the middle line; the patients had nausea and tendency to vomiting, slight meteorism, pain on pressure of the abdomen, frequent evacuations; the stools being, as a rule, alternately mucous and containing ill-digested substances, and sanguinolent. The pulse averaged about 110. This sort of entero-colitis generally assumed a chronic form. Some of the symptoms disappeared, and the fever decreased; but the meteorism and diarrhoea continued, and soon brought on emaciation. The patients lost their colour, and assumed a cachectic aspect. The illness generally terminated in death, notwithstanding all treatment, and even change of air, which was recommended for some of the cases. The writer attributes these intestinal symptoms to the kind of feeding to which the little children had been subjected, principally to feeding by farinaceous food. He says that he never observed entero-colitis in children suffering from scarlatina who had been nourished by meat, broth, and nitrogenised food before the commencement of the attack.

13. *Durand on the Treatment of Infantile Purulent Pleurisy.*—Dr. Martial Durand has communicated a very complete study on this subject to the Society of Medicine and of Surgery of Bordeaux, which terminates in the following conclusions. 1. Aspiratory puncture, either simple or followed by injections, is a bad method of treatment, of which the duration is frequently much prolonged, and which scarcely ever dispenses with the necessity of having recourse to other means. 2. The method of treatment by drainage-tubes, and especially by Potain's siphon, has almost all the inconvenience of pleurotomy, since it does not thoroughly preserve from the entrance of air, without having its advantages, since it does not allow the exit of the intrapleural detritus. 3. M. Durand believes that the objections to the entrance of air into the pleura have been much exaggerated. It does not seem to him that this is dangerous if the pus flow continuously, and if the air be not imprisoned. 4. The operation for empyema seems to him to be the best of methods when the diagnosis is very clear. With this proceeding, the disease is, perhaps, less prolonged, but it is desirable that this operation should be made use of before the patient has fallen into a state of cachexia. The operation gives good results, and would give better if the general condition were good, and with the use of antiseptic methods.

14. *Martin on Vaccinia Transmitted from Mother to Infant.*—Dr. Henry A. Martin of Boston records a case of generalised vaccinal eruption occurring in

a nursing infant aged seven months, who had not been vaccinated, and was suffering from eczema capitis, but whose mother was undergoing revaccination with bovine vaccine virus. He has seen two other cases of general vaccinia, and these also were children suffering from eczema.

15. *Elliott on the Feeding of Infants*.—Dr. Elliott (*Practitioner*, June 1881) recommends Cadbury's cocoa essence, or Fry's cocoa powder, or cocoa nibs, for infants. Of either of the first two, he recommends a teaspoonful to be dissolved in half a pint of boiling milk and water (equal parts). Of the nibs, take one ounce, and boil it in a pint and a half of water for five hours, strain, and add new milk and sugar. Cocoa makes an excellent food for thin and wasted infants, who take it greedily and soon improve in health.

16. *Greult on Hot Water in the Asphyxia of New-born Infants*.—M. Greult (*Jour. de Méd. de Paris*, 1882, No. 11) reports the case of a primipara, in which he delivered by forceps, and after a tedious labour, an infant which was breathless, cold, with scarcely any movement of the heart, and very feeble pulsation in the cord. Knowing the researches of Dr. Lebon on the action of hot water in the asphyxia of young animals, he obtained a vessel of water as hot as the hand could bear, which is about 45 deg. Cent. (113 deg. Fahr.), plunged the child in this, and commenced artificial respiration by alternately raising the arms and compressing the chest. At the end of a minute or more, the skin reddened, and a slight movement of the chest indicated commencing respiration; at the end of two minutes the child began to cry, to breathe, and move. He thinks the hand enables one, in the absence of a thermometer, to estimate with sufficient precision the temperature of the water for this purpose, as at 50 deg. Cent. (122 deg. Fahr.) it seems burning hot.

17. *Lawrence on Narcotism in Infancy*.—Mr. H. Cripps Lawrence draws attention to this important subject (*Practitioner*, May 1882), and traces the results of the administration of a narcotic given in small but repeated doses to a healthy child. 1. A modified degree of excitement supervenes, followed by sleep; and this condition may recur for a period varying from a few days to a week or two. If the repetition of the narcotic be at all frequent, or if it be given in any but very small amount, this period of favourable narcosis will be proportionately diminished, and the chances of its lethal effect increased. 2. In some infants, the effect will be to speedily constipate, and digestion will be arrested. Other infants, the subjects of imperfect digestion associated with colic, will be for a time benefited by a moderate amount of narcotic. The sedative acts by checking peristalsis, and so enables the food to remain a longer time in contact with the digestive juices, and thus to become more perfectly digested. A more frequent sign of the administration of a narcotic is the occurrence, or concurrence, of vomiting and diarrhoea, and then a longer time will elapse before narcosis ensues. 3. Diaphoresis and diuresis, one or both, may occur. The predominance of either will be dependent upon the amount of fluid injected, the character of these fluids, and the atmospheric temperature. 4. The fæces soon become paler and more solid, more and more deficient in bile, and the evacuations become less frequent. They become verdant green, with or without mucus, and may be blood-streaked from constipation and tenesmus. 5. Later, the marked depression of the vital powers

gives rise to sinking of the anterior fontanelle, feeble pulse, an earthy complexion, wasting and loss of weight, and pinched features. The infant alternates between peevish whimpering and imperfect somnolency. The pupils, at first contracted, may now contract or dilate, or be unequal. When this stage is reached, any further dose of the narcotic may prove lethal; and it is now that the cumulative effect of the narcotic becomes dangerous. Either clonic convulsions may set in, or, more frequently, profound and, perhaps, fatal coma. Four special sources of danger during the course of the narcotism are pointed out, viz., irregularity in the administration of food; food given at an excessive temperature, whereby vomiting is increased; disregard of the hygiene of the nursery, and indulgence of the nurse in the same narcotic as is being administered to the infant.

T. STEVENSON, M.D.

OTOLOGY.

RECENT PAPERS.

1. OUSPENSKY, M.—Hysterical Deafness. (*Annal. des Mal. de l'Oreille, du Larynx, etc.*, Dec. 1881.)
2. LADREIT DE LACHARRIÈRE. — On Tinnitus. (*Ibid.*)
3. BABER, CRESSWELL.—Chronic Non-Purulent Disease of the Middle Ear: Great Benefit from the Audiophone. (*Specialist*, Dec. 1881.)
4. BONNAFONT.—On the Possibility of Certain Nervous Phenomena, such as Vertigo, etc., generally attributed to the Semicircular Canals, being produced by Simple Pressure on the Membrana Tympani, and Fenestra Ovalis. (*Ibid.*)
5. HABERMANN, J.—On the Employment of Anterior Rhinoscopy by Zauffal's Method, for the Examination of the Naso-Pharyngeal Cavity. (*Ibid.*, and *Wiener Med. Presse*, 1881.)
6. THEOBALD, SAM.—Suggestions regarding the Treatment of Suppurative Otitis. (*Trans. of the Amer. Otol. Soc.*, 1881.)
7. ROOSA, D. B. ST. JOHN.—On the Value of Operations in which the Tympanic Membrane is Incised. (*Ibid.*)
8. ROOSA, D. B. ST. JOHN.—On the Tuning-Fork in Diagnosis. (*Ibid.*)
9. GREEN, J. ORNE.—Removal of Foreign Bodies by Displacement Forward of the Auricle and Cartilaginous Meatus. (*Ibid.*)
10. BURNETT, C. H.—Malignant Growth in the Naso-Pharynx, with Early Aural Symptoms. (*Ibid.*)
11. KIPP, C. J.—A Case of Epithelioma of the Middle Ear. (*Ibid.*)
12. BUCK, A. H.—Sudden and Complete Loss of Hearing in one Ear during an Attack of Mumps. (*Ibid.*)
13. BUCK, A. H.—Vascular Tumours of the Membrana Tympani. (*Ibid.*)
14. STEINERÜGGE, H.—On the Topography of the Human Vestibule. (*Archives of Otolaryngology*, vol. x, No. 4.)
15. RUSHMORE, J. D.—History of a Case of Hæmorrhage from the Ear. (*Ibid.*)
16. BURNETT, SWAN M.—Otomycosis Purpureus (Wreden) in the Human Ear. (*Ibid.*)
17. AYRES, C. S.—Exostoses of the External Auditory Canal. (*Ibid.*)
18. AGNEW, C. R., and WEBSTER, D.—Clinical Contributions to Otolaryngology. (*Ibid.*)
19. POLLAK, S.—Necrosis and Elimination of almost the whole Bony Apparatus of Hearing: Recovery. (*Ibid.*)
20. KNAPP, H.—Trepining of Mastoid in a Case of Otitis Catarrhalis Chronica, with an Intact Membrana Tympani; Opening of the Lateral Sinus: Recovery by First Intention. (*Ibid.*)
21. RECLUS, PAUL.—On the Use of the Naso-Pharyn-

geal Douche in the Treatment of Certain Affections of the Nasal Cavities. (*Annal. des Mal. de l'Oreille, du Larynx, etc.*, March 1882.)

1. *Ouspensky on Hysterical Deafness*.—Dr. M. Ouspensky of Moscow (*Annales des Maladies de l'Oreille, du Larynx, etc.*, Dec. 1881) relates two interesting cases of the above. Case I. E. M. V., female, married, aged 19, anæmic and nervous, was first seen May 17, suffering from complete deafness on both sides, the result of an otitis from scarlatina, complicated with diphtheritic sore-throat, in the previous February. The tuning-fork on the head was only faintly perceived in the right ear. Examination showed that the right membrana tympani was almost entirely destroyed; on the left side, the posterior segment, which appeared atrophied, alone remained. There were continual tinnitus, like rushing of wind in the left ear, and loss of taste and smell, with profuse nasal catarrh. During the diphtheritic scarlatina, there had been unconsciousness for some time; and with the onset of deafness the voice became hoarse and nasal, and fluid nourishment escaped through the nostrils. The left facial nerve was also paralysed. At the age of 18 years she suffered from an uterine disorder. Previous treatment had stopped the otitis, but the deafness remained complete. Being sent into the country by the author on account of her great weakness, the patient began to hear her own voice on June 20th, and about July 1st she could hear words spoken close to her, with the right ear in a low tone, and with the left in a loud voice. Further amendment ensued, till July 19th, when she suddenly became completely deaf without any cause. In two days the hearing returned, but was lost again each week. The onset of deafness was always preceded by a modification of the voice, which became hoarse and hollow, but again resumed its clear character when the deafness disappeared. When seen on August 23rd, the patient could understand ordinary conversation at a short distance from the ear, and could hear high, but not low, tones. Taste begun to return, but the sense of smell was still lost. Further examination showed that there was also anæsthesia of the left side of the head, the concha and the nose. Galvanisation of the cervical sympathetic (4 to 6 elements of Brenner's apparatus) for five minutes caused the deafness to disappear instantaneously, and under six applications the attacks became less frequent and shorter. At the end of October the report was, that the attacks of complete deafness no longer occurred, and that only the habitual deafness, which had become less, remained. The otitis and paralysis of the different nerves as indicated by the above-mentioned symptoms, the result of the diphtheria, were, the author considers, in this case complicated with hysteria. Case II. S. P. V., widow, aged 43, consulted the author for deafness of five years' duration, of the right ear only, accompanied by a blowing noise. The tuning-fork on the vertex resounded in the right (affected) ear. The watch and loud voice were not heard with the right ear. The right auricle and meatus were anæsthetic; the tympanic membrane was normal. Examination of the Eustachian tube and auscultation showed nothing particular. At 16 she was married, and three years afterwards suffered from an uterine complaint, the result of a miscarriage. Five years ago, suddenly, after a fit of sneezing, she experienced a blowing noise in the right ear, and lost the hearing. Under treatment by specialists (including Politzerising) she began to hear the watch, but only for a time.

The author then tried galvanisation of the cervical sympathetic, beginning with four elements, but it was only when the current was gradually increased to twelve elements that the patient experienced vertigo, and felt the passage of the current. The hearing returned at the same moment, and with it the sensibility of the auricle and meatus. The noise was slightly diminished, but did not cease. The hearing remained satisfactory for a month, the patient hearing conversation in a low voice at a distance of 70 centimètres, and a whisper at 27 centimètres. The author, in conclusion, suggests that in every case of deafness without pathological changes in the meatus or middle ear, the degree of sensibility of the auricle should be examined.

3. *Baber on the Use of the Audiphone*.—Mr. Cresswell Baber (*The Specialist*, Dec. 1881) records a case of chronic non-purulent disease of the middle ear, in which the audiphone was of great benefit. An ordinary voice, which was heard only at about one foot in front of the patient's face, was audible with the instrument at a distance of 6 or 7 feet. The patient (a woman, aged 26) heard decidedly better with the audiphone than with a conical metallic hearing trumpet. A loud whisper was heard when repeated close to the audiphone, but not without that instrument. For hearing sounds at a distance, and for bass voices, the patient found it necessary to curve the instrument more than usual. The author considers that the case encourages to a further trial of the principle of the audiphone, if only with a view of discovering exceptional cases, such as the one under consideration. He is of opinion that a simple piece of cardboard or a Japanese fan is sufficient to indicate the presence of such cases.

5. *Habermann on the Use of Anterior Rhinoscopy, by Zaufal's Method, for the Examination of the Naso-Pharyngeal Cavity*.—Dr. J. Habermann (*Wiener Med. Presse*, 1881, and *Annal. des Mal. de l'Oreille, du Larynx, etc.*, March 1882) considers that Zaufal's specula are of use, not only in exceptional, but in ordinary cases. Nos. 3 and 4 (the smallest sizes) he finds suffice to give a clear and distinct view of the naso-pharynx.

5. *Theobald and others on the Treatment of Suppurative Otitis*.—Dr. Theobald (*Trans. of the American Otolog. Society*, 1881) has employed, with very gratifying results in suppurative otitis (including under this term otitis externa diffusa, as well as otitis media suppurativa acuta and chronica), insufflation of a powder consisting of equal parts of boracic acid and oxide of zinc. Occasionally, when this fails to do good, he employs a mixture of boracic acid and alum, or oxide of zinc alone. The author describes numerous cases, in which he has used the mixture of oxide of zinc and boracic acid. Dr. H. D. Noyes has found a mixture of equal parts of tannin and boracic acid very satisfactory. Dr. Sexton has employed a combination of boracic acid and calendula (25 to 30 per cent. of the latter). Drs. Burnett and J. Orne Green spoke in favour of pure boracic acid.

7. *Roosa and others on Operations on the Membrana Tympani*.—Dr. St. John Roosa, in opening a discussion on this subject (*Ibid.*, pp. 448 *et seq.*), declared himself in favour of what he terms the gentle method, his principles being (1) to use a small needle for paracentesis, and (2) to make the incision just large enough to give exit to the pus, blood, or mucus. He rejects as useless, according to his experience, all operations in chronic non-suppurative cases where there is no suspicion of retained mucus

in the tympanic cavity. Even in acute and sub-acute cases, when the presence of accumulations of mucus or pus can be plainly made out, he regards paracentesis as an operation not to be lightly undertaken, and as one which may sometimes be avoided by other suitable treatment, such as Politzerising or leeching. The general opinion of the meeting was in accord with the conclusions advanced by Dr. Roosa, as opposed to the operations formerly recommended in chronic non-purulent disease of the middle ear without secretion, and in favour of operations where there are collections in the tympanic cavity. Several members, however (*e.g.*, Drs. Noyes, C. H. Burnett, and Prout), advocated earlier incision in cases of acute suppuration. Hinton's method of washing out the drum-cavity in chronic cases was spoken of as having 'fallen into disuse,' and there was no evidence given in favour of tenotomy of the tensor tympani.

8. *Roosa on the Tuning-fork in the Diagnosis of Diseases of the Ear.*—Dr. St. John Roosa (*Ibid.*) formulates his conclusions in regard to the tuning-fork as follows. 1. If one ear be normal as to the hearing power, and the other abnormal, and a vibrating tuning-fork (C) be placed upon the vertex or teeth, if its sound be intensified in the ear whose hearing power is diminished, there is disease of the external or middle ear, but no lesion of the labyrinth or nerve. 2. If, under the same conditions of a sound ear on one side, while the hearing power of the other is impaired, the tuning-fork be not heard better in the worse ear, even if the meatus be stopped by the finger or the like, there is disease of the labyrinth, the acoustic nerve, or brain. 3. If the vibrating tuning-fork be heard better on the mastoid bone than when placed in front of the meatus, there is disease predominantly of the middle ear. 4. If the tuning-fork be heard better through the air than through the bones, there being impairment of hearing, the disease which gives rise to this symptom is situated in the brain, nerve, or labyrinth.

9. *Green on the Removal of Foreign Bodies by Displacement forward of the Auricle and Cartilaginous Meatus.*—Dr. Orne Green (*Ibid.*) relates a case in which he removed portions of two bullets (weighing altogether $48\frac{1}{4}$ grains) by the method described by Von Tröeltsch, *i.e.*, by displacement forward of the auricle and cartilaginous meatus after a semicircular incision had been made above and behind the auricle through the periosteum, and after division of the meatus in the upper and posterior part at the junction of the cartilaginous and osseous portions.

12. *Buck on Loss of Hearing from Mumps.*—Dr. A. H. Buck (*Ibid.*, p. 488) relates two cases of sudden and complete loss of hearing in one ear during an attack of mumps. In these cases (which occurred in patients aged 16 and 41 years respectively), there was sudden and complete deafness in one ear on the third or fourth day of the disease; in the first with decided pain, in the second without any pain whatever; but in both with distressing subjective noises. In Case I, both parotid regions were apparently equally affected by the mumps, but only the right ear became deaf. In Case II, on the other hand, the left parotid region was more severely affected, and it was on that side that the loss of hearing occurred. In this case, about fifteen days after the primary attack, a second one, attended by nausea and dizziness, and considerable difficulty in maintaining equilibrium, occurred. The author assumes that in the first attack the cochlea alone was involved, whilst in the second an escape of blood or

plastic exudation took place in the vestibule or in the ampullæ of the semicircular canals. In Case I, there was no nausea nor dizziness. The author, therefore, considers that in this case the cochlea alone was affected. In Case II, it was also noticed that, four days after the sudden attack of pain and deafness, the middle ear of the affected side presented absolutely no signs of inflammation, and that the patient heard the ticking of the watch in the left ear, when it was pressed firmly against the right or affected ear. In both cases the deafness proved perfectly irremediable, but the symptoms in Case II, which were apparently due to the semicircular canals, were greatly diminished by leeching. Various opinions regarding the mode in which the ears become affected in these cases were expressed by members in discussion; and the author points out that, if Vogel's view be correct, according to which the channel by which the inflammation is conveyed is the facial nerve, it is easy to understand why the middle ear should escape, and why only the cochlear portion of the labyrinth should be seriously affected. The very close proximity of the facial nerve to the first cochlear whorl, where the author imagines the thin bony lamina may sometimes be absent, renders it probable that this is the spot at which the disease passes from the facial canal to the cochlea.

13. *Buck on Vascular Tumours of the Membrana Tympani.*—Dr. Buck (*Ibid.*) describes a case in which there was a small vascular mole in the central portion of the posterior superior quadrant of each tympanic membrane.

15. *Rushmore on a Case of Hæmorrhage from the Ear, probably due to a Fracture of the Skull.*—Dr. Rushmore (*Archives of Otolology*, Dec. 1881) relates a case in which about sixteen ounces of venous blood escaped from the left auditory canal. The author subsequently found a rupture of the membrana tympani. He judges that in all probability there had been a bone lesion downwards and forwards. Recovery ensued.

16. *Burnett on Otomyces Purpureus in the Human Ear.*—Dr. Swan Burnett (*Ibid.*) describes a case in which he removed from the meatus, a dark red mass resembling at a superficial glance a clot of dried blood. On microscopic examination, it proved to consist of a fungus similar to that described under the above name by Wreden, of St. Petersburg. The author's opinion is that the otomyces purpureus is not in any way connected with either aspergillus niger or flavus. It appears to him to assume the asceous form from the outset.

17. *Ayres on Exostosis of the External Auditory Canal.*—Dr. S. C. Ayres (*Ibid.*) relates the case of a man, aged 28, both of whose meatuses were occluded by a bony septum about half an inch from the posterior border (*sic*) of the cartilaginous canal. The external surface of both of the septa was concave, and covered with epidermis. The central portion appeared whiter than the periphery. The growth in the deafer ear (hearing distance = $\frac{1}{2}$ -60") was operated on with the dentist's drill, but for various reasons only a small perforation was made through it. The hearing, however, reached that of the better ear (*i.e.* $1\frac{1}{2}$ -60"). During childhood, the patient had suffered from chronic purulent inflammation of the middle ear.

18. *Agnew and Webster on some Otolological Cases.*—The authors relate (*Ibid.*) four cases. The first is one of binaural deafness, probably due to simultaneous exudation into both labyrinths; the only known cause, except a fall on the head a year previously,

being the prolonged occupation of a damp room. The patient was totally deaf to conversation, but could hear the watch readily at a distance of several inches. The second case is one of wound of the membrana tympani by an oak stub. The third is of some interest, being one of double rupture of the membrana tympani from the blow of an open hand on the left ear. Four days after the injury, the two ruptures were distinctly visible, one being in front of the handle of the malleus, nearly parallel with that structure, and extending about two-thirds of its length, the other extending from the end of the handle horizontally backward to nearly the periphery of the membrane. The warm aural douche was applied on one or two occasions; nevertheless (*Rep.*) the ruptures healed in a short time. In Case II, syringing was also employed to remove some pieces of bark and dirt from the ear; but the perforation healed with little or no impairment of healing. Case IV is one of supposed foreign body in the tympanum, in which attempts at removal before the case was seen by the authors had much damaged the ear.

19. Pollak on Necrosis of the Bony Apparatus of Hearing.—In this case (*Ibid.*) the author removed with forceps under ether (1) a part of the mastoid process and cells; (2) the whole of the petrous portion of the temporal bone; and (3) the osseous portion of the meatus. They were all removed at one sitting. The patient, aged 5 years, recovered with facial paralysis; but there was no loss of power of the orbicularis palpebrarum on the affected side.

20. Knapp on Trephining of the Mastoid Bone in Chronic Tympanic Catarrh.—Dr. Knapp (*Ibid.*) trephined for persistent pain in the mastoid process in a case of chronic non-suppurative inflammation of the middle ear. The patient, who was 16 years of age, had suffered from the pain for three months. The author opened the mastoid bone by means of a chisel, and in doing so copious venous hæmorrhage occurred, the author thinks from an injury to the lateral sinus. He wiped out the wound carefully, and closed it with silk sutures passed through the skin and periosteum, a thin silver tube being inserted at the lower angle of the wound. The wound healed readily, and the tympanic membrane and meatus showed no signs of inflammation. Thirty-nine days afterwards, the pain had not reappeared, and the hearing was improved. The author regards the case as one of chronic mastoiditis interna leading to sclerosis. In the treatment, he lays stress on the hermetic closure of the wound without the use of antiseptics.

21. Reclus on the Use of the Naso-Pharyngeal Douche in the treatment of certain Affections of the Nasal Cavities.—Dr. Paul Reclus (*Annal. des Mal. de l'Oreille, du Larynx, etc.*, March 1882), recommends the use of milk in large quantities as a nasal douche, and cites three cases in which recovery ensued with this treatment alone; the first two being cases of chronic nasal catarrh in young girls, the third a case of ulceration (larger than a franc in size, and two or three millimètres deep), of uncertain origin, occurring on the septum, in a man aged 56. The author allows an enormous quantity of milk to traverse the nares, sometimes as much as 85 to 40 pints *per diem*, the milk as it flows out being of course used again.

E. CRESSWELL BABER, M.B.

NEUROLOGY.

RECENT PAPERS.

1. GIBNEY.—Intermittent Spinal Paralysis of Malarial Origin. (*Amer. Jour. of Neurol. and Psychiatry*, No. 1, 1882.)

2. TERRIER and SUE.—Symptoms attending Fractures in Epileptic Subjects. (*Revue de Chir.*, Feb. 1882.)

3. LORING.—On Intracranial Disease and Choked Disc. (*New York Med. Jour. and Obstet. Rev.*, June.)

4. HAMILTON.—Sensory Epilepsy. (*New York Med. Jour. and Obstet. Rev.*, June.)

5. MILLS.—Hystero-Epilepsy. (*Amer. Jour. of Med. Sciences*, Oct. 1881.)

6. CHARCOT.—Galvanism of the Cranium in Hypnotism. (*Le Prog. Méd.*, 1882, No. 4.)

7. FÉRÉ.—On Hystero-Epilepsy. (*Arch. de Neurol.*, No. 8.)

8. BOURNEVILLE and BONNAIRE.—On Lesion of the Island of Reil. (*Arch. de Neurol.*, No. 8.)

1. *Gibney on Intermittent Spinal Paralysis of Malarial Origin.*—Dr. Gibney (*Amer. Jour. of Neurol. and Psychiatry*, vol. i, No. 1, 1882) has described three cases of this somewhat rare affection. The first was that of a boy aged 7, who lived in a damp house, in the immediate neighbourhood of which malarial fevers prevailed. He was suddenly seized with feverish symptoms, and next morning had paralysis of the legs, which, the day after, was followed by paralysis of the arms. He took quinine, and appeared better in a week, but fell ill again three days afterwards with a similar attack, which left complete paralysis of the four extremities. At the end of three months he was much better, was removed from the malarious locality, and, four months later, appeared to be quite well. He then returned to a damp place, and had a relapse of paralysis five weeks after, but recovered completely in three weeks under quinine and with removal. A fourth attack took place four and a half months after return home. He was again in the hospital, and, at the end of six months, recovery was not complete. The fifth attack occurred six months after discharge, and, at the end of two months, recovery was nearly complete. There was loss of tendon reflexes, and diminished or absent electric contractility of the muscles, so that the case looked, at first sight, like one of anterior poliomyelitis. This intermittent form of spinal paralysis forms a very striking contrast to the ordinary form of spinal paralysis, which is very constant in its appearance. Cases of this kind have been recorded by Macario, Romberg, and Hartwig, but are, on the whole, exceedingly rare, although other neuroses, more especially neuralgia, are common after malarial infection; and Trousseau even maintained that intermittent fevers, under whatever form they might present themselves, ought to be classed with the neuroses. Dr. Gibney argues that the pathology of these cases must be essentially different from that of ordinary spinal paralysis of infancy, in which latter disease there is rarely, if ever, complete recovery. Hartwig believes the changes which take place to be transitory hyperæmia and serous transudation into the substance of the cord; but Erb has objected to this view that the disturbance is always confined to the motor portions of the cord, leaving the sensory portions entirely unaffected. In Gibney's cases, however, there were violent pains in the affected muscles, and general hyperæsthesia, which shows that the sensory portions do sometimes suffer. He thinks

that the disease consists of an active hyperæmia of the cord, more especially in the region of the anterior cornua, followed by passive hyperæmia and œdema. In hysterical paralysis, the electrical tests of the paralysed muscles remain generally normal, even where the affection has lasted for years; nor could one assume lead-palsy, which has quite different clinical features. Dr. Gibney says that masked intermittent fevers prevail about New York, that they have very irregular types, and are, above all others, neurotic in their phenomena; and that it is necessary to differentiate between the curable and incurable paralyses of children.

JULIUS ALTHAUS, M.D.

2. *Terrier and Luc on the Symptoms attending Fractures in Epileptic Subjects.*—These writers report (*Revue de Chir.*, Feb. 1882) two cases, one of fracture of the clavicle in a hysterico-epileptic woman, and one of fracture of the leg in an epileptic patient, also a female. In both cases, consolidation of the fracture was effected at the proper time, without presenting anything characteristic in its progress. The phenomena observed were rather accessory symptoms, depending on the nervous condition of the patients. The first patient, who was very excitable, greatly exaggerating her sensations, and excessively impressionable, manifested, immediately after the fracture of the left clavicle, an acute hyperæsthesia on the same side of the body, with very painful contraction of all the muscles of the arm and shoulder. These symptoms improved after the application of continuous currents and magnets, but returned more violently after each attack, and that for more than six months after the fracture. The second patient, who was apathetic and indifferent, almost insensible to external influences, fractured both bones of the leg without showing the least pain after the accident, and continued, during eleven days, to use her leg as before. It was very difficult to make her wear the necessary apparatus, of which she said she had no need. Thus, write the authors, in two different cerebro-spinal systems, one very excitable and one not excitable, there were corresponding sensory and motor disturbances of absolutely opposite nature—anaesthesia in one patient, hyperæsthesia and contraction in the other.

3. *Loring on Intracranial Disease and Choked Disc.*—Dr. Edward G. Loring contributes to the June number of the *New York Med. Jour. and Obstet. Review* an article on the nervous connection between intracranial disease and choked disc, the conclusions of which are these. 1. The vaso-motor theory, as advanced by Benedikt, is not sufficient to explain either the mode of transmission of the morbid irritation within the head, or the resulting neuritis optica. 2. The irritation is conveyed, not by the isolated fibres of the sympathetic system, as stated by Benedikt, but through the agency of the trigeminus. 3. Choked disc or papillitis, in connection with brain-disease, is the expression of an irritation or compression of certain intracranial fibres of the fifth pair which preside over the blood-supply of the disc and neighbouring parts, and also maintain the healthy processes of waste and repair of the tissues themselves. This being so, he adds, the same analogies and distinctions between 'irritation' and 'inflammation' can be made here as with sympathetic ophthalmia; so that here, as well as there, the irritation may exist as such for an indefinite time, or may so reduce the vitality and resisting power of the tissue of the disc and surrounding parts, as to develop gradually, or explode suddenly,

into an actual inflammation—that is, into a neuritis. The immediate and exciting cause of this neuritis may then be either an external one, such as exposure to cold or heat, over-exertion, either mental or physical, or, indeed, too much exposure to light, the effects of which, under the weakened condition of the organ, may be looked upon as a 'traumatism'; or the exciting cause may be an internal one, such as some irritation from the condition of the blood and circulating fluids, either chemical or mechanical, either local or general, which, insufficient in itself to produce any bad effect upon a normal disc, may yet be just sufficient to produce a condition of inflammation in a part that is weakened and irritable.

4. *Hamilton on Sensory Epilepsy.*—In the *New York Med. Jour. and Obstet. Review*, for June 1882, Dr. Allan McLane Hamilton presents a paper on cortical sensory discharging lesions (sensory epilepsy), or that form of epilepsy in which the sensory element preponderates, whether as an aura preceding a motor discharge, or occurring as a part of a paroxysm in which there is little or no succeeding motorial disturbance, but simply a discharge consisting of a preliminary alteration of special sensibility, and an immediate subsequent stage of unconsciousness. In the majority of these cases there is, he remarks, the simplest form of subjective consciousness of sensory impressions, most of the attacks consisting of the primary stages suggested by Hughlings Jackson, such as a sudden stench in the nostrils, or coloured vision; but in two or three instances there has been much more than this, and the phenomena have been quite remarkable. In some cases, the occurrence of a transient contraction of the fingers of one hand lent additional interest to the history, especially in regard to localisation. In one case, the patient's sensory condition was not the dreamy state referred to by Jackson, but there was always an hallucination of taste, the patient declaring that he tasted copper or some other nauseous substance; and, in other cases, there were equally striking proofs of the primary involvement of the cortical centres. The occasional occurrence of hallucinations as a part of the epileptic attack has been mentioned by various authors. Brierre de Boismont, Esquirol, Delasiauve, Maisonneuve, Billod, Sommers, Bergmann, Guislain, and Tigges, as well as many other writers, have furnished cases which began with sensory auras or hallucinations; but none of them, says Dr. Hamilton, have made a distinct classification of sensory and motorial epilepsy, and but little mention is made of the disease where the paroxysms consist solely of sensory phenomena, the disturbance of motility being absent. He has not, so far, met with cases in which the individual was influenced by his hallucinations to express them by special motor acts before the attack, except in an unimportant way. On two occasions, he has been present at the beginning of a sensory attack. In one instance, the patient complained afterwards that he smelt a horrible stench. Immediately before losing consciousness, he carried his hand up to his nose, and immediately afterwards became oblivious to everything about him. A similar action was performed by a patient who forcibly placed both hands over his eyes, as it afterwards transpired, to keep out a bright light that blinded him. In the light of all that has been done in the localisation of cerebral disease, Dr. Hamilton thinks that we should discover, if possible, the part played by the cortical sensory centres in the genesis of such epilepsies. So far, little has been brought forward to connect lesions of the sensory centres with special symptoms.

In our pathological discussion of sensory epilepsy, the distinction should be made between lesions of the thalamus opticus and those of the cortical sensory zones; for in the one instance the sensory disturbance may be called the essential, while in the other there may be said to be an affection of special subjective consciousness. If an impression upon the organ of sense be sufficiently intense to impress the infracortical central sensory apparatus (thalamus opticus) centripetally, it does not follow that there need be any implicated alteration of function in the cortical sensory regions. A lesion of the posterior part of the thalamus opticus, for example, may result in blindness—a mechanical blindness, if such an expression can be used, though there are exceptional cases reported by Brown-Séquard where even this is not the case—but it will not produce word-blindness, a purely psychical defect. There must be some altered cortical function to account for the unmistakable operations which permit the individual to recognise the altered sense-states, and enter into the involuntary formulation of hallucinations which are afterwards remembered. The author, therefore, does not believe that the disease of the thalamus opticus alone plays any part in the origination of hallucinations. He thinks we may recognise a form of epilepsy of sensorial character, the motorial features being either absent or insignificant; that such sensory manifestations arise from an unstable condition of the sensory cortical centres; that a slight grade of sensory disturbance may indicate simply a suspension of inhibition through an exhausted state of the perception centres which are infracortical, or a suspension of the influence of the superior cortical centres, in which case the process is more complex, and the result may be the formation of hallucinations.

5. *Mills on Hystero-Epilepsy.*—In an elaborate paper in the October number of the *Amer. Jour. of the Med. Sciences*, Dr. Chas. K. Mills, lecturer on mental diseases and electro-therapeutics in the University of Pennsylvania, reports a number of interesting and important observations upon two original cases of hystero-epilepsy, or hysteria major, of Charcot. Following these cases, the author considers at some length the phenomena of the attack, and compares the description given by the French writers, with the clinical histories of his original cases, showing a remarkable correspondence between the phenomena presented. The attack of hystero-epilepsy is always preceded, sometimes for several days, by prodromata, which are often numerous and varied, embracing trouble of all parts of the economy. Dr. Mills, following Richet, studies them mainly under four heads, namely: 1. Psychical manifestations, hallucinations; 2. Affections of the organic functions; 3. Affections of motility; 4. Affections of sensibility. The analysis of these systems is very interesting, especially since they include the discussion of the 'epileptogenic zones' of Brown-Séquard, something analogous to which appears in hystero-epilepsy, and which, in the paper, are shown by diagrams. The stage of invasion being over, the attack itself has likewise been divided into four distinct periods: 1. Epileptoid; 2. Great contortions; 3. Emotional attitudes; 4. Delirium. Some of these, according to Richet, admit of subdivisions into phases; modifications also may occur. Besides these great attacks and their numerous varieties, grave hysteria counts among its manifestations phenomena which merit the name of permanent symptoms. The most striking of these are the troubles of sensibility, such as anæsthesia, hyperæsthesia,

etc., the affections of motility, such as paralysis, contracture, common chorea, and rhythmical chorea. They also include disorders of secretion, such as anuria, vomiting, and hæmatidrosis; troubles of nutrition, such as result from prolonged abstinence; and disturbances of circulation, such as flushing, urticaria, stigmata, or ecchymoses, etc. As regards the intellectual faculties, it is observed that they are not materially affected even after years; the prognosis, therefore, is far less grave in this respect than in epilepsy proper. In the treatment, which is carefully studied by Dr. Mills, galvanism occupies a prominent place, both in the attack and in the interval. In France, the hydrotherapeutic method of treatment has been found of the greatest service. Ovarian compression, inhalation of chloroform or ether, or hypodermic injections of morphia, and electricity, are employed during the attack. Subsequently, metallo-therapy externally and internally, applications of magnets, static electricity, or weak galvanic currents, and other remedies, have been used with varying results; but the author properly adds that 'good hygienic influences, moral, mental, and physical, are of the utmost importance'. The article is very freely illustrated by striking original designs and diagrams.

6. *Charcot on Galvanism of the Cranium in Hypnotism.*—Charcot (*Le Prog. Méd.*, 1882, No. 4), referring to his previous communications on this subject, said he had proved, by direct experiment on the cadaver, that electrical currents could be transmitted through the integument and cranial bones to the surface of the brain. He had found that all the cases did not conform to his previous description—that they must be divided into three groups. In the first, as already described, there was movement of the opposite side of the body, generally at the closure of the current. In the second group, the movements predominated markedly on the same side of the body. It was noteworthy that three of the four cases forming this group showed when awakened similar contractions under the influence of cephalic galvanism as those seen when in a state of lethargy. In the third group, no effect was produced by cephalic galvanism. M. Charcot does not think the movements depend on the excitation of the cortical motor centres. There is much that requires further investigation. Perhaps, founding one's self on the experiments of Marshall Hall, Bochefontaine, Brown-Séquard, Duret, and others, one might bespeak the intervention of the excitation of sensory regions of the dura mater.

7. *Féré on Hystero-Epilepsy.*—Charcot's classical description of the ordinary phases of hystero-epilepsy is now well known, but M. Féré points out that there are exceptions to this type (*Archives de Neurol.*, No. 8). He gives a case in which the movements, instead of being, as usual, in the longitudinal axis of the body, take place around its transverse axis. It is interesting to note that the patient was subject to true epileptic attacks, which were hereditary, from the age of nine to thirteen years. When the catamenia appeared, the disease became transformed into hystero-epilepsy. The influence of puberty over these neuroses is thus strikingly illustrated. It must be added, that the patient was also affected with hemianæsthesia of somewhat irregular distribution. This same patient was attacked with herpes zoster in the path of the nerves arising on a level with the dorso-lumbar hysterogenic zone. Whilst the eruption was in course of development, the convulsive attacks entirely ceased.

8. *Bourneville and Bonnaire on Lesion of the Island of Reil.*—An interesting case is given by the above-named observers, in which a man aged 34 was suddenly seized with left hemiplegia (*Archives de Neurol.*, No. 8). The attack took place twenty years before his admission into Bicêtre. Six years after the paralytic seizure, the patient became subject to epileptic attacks. When the man came under observation, he was found to be suffering from left hemiplegia, with contracture; the arm and leg were a good deal wasted, and there was a perforating ulcer on the sole of the left foot. The tendon-reflexes on the paralysed side were much exaggerated, and there was spinal trepidation. There was no disorder of sensibility, but the intellect was much impaired. The necropsy showed, on the right side, atrophy of the posterior part of the third frontal convolution, of the two ascending convolutions of the globule of the gyrus angularis, and of the entire island of Reil. The first and posterior parts of the second temporo-sphenoidal convolution were also involved. The island of Reil was replaced by a kind of gelatinous membrane of reddish colour. The parts above-named were simply atrophied, and presented no change of colour. The right corpus striatum and optic thalamus were considerably reduced in volume. Secondary descending degeneration was visible to the naked eye in the various regions through which the pyramidal tract passed.

W. B. HADDEN, M.D.

REVIEWS.

THE OPIUM QUESTION.

Medical Testimonies as to the Effects of Opium-Smoking. By Medical Men who have resided in China. With a Preface by Sir JAMES RISDON BENNETT, M.D., LL.D., F.R.S. London: Dyer Brothers. 1882.

The Opium Trade. By Sir RUTHERFORD ALCOCK, K.C.B. *Journal of the Society of Arts*, No. 1,522. London: Bell and Sons. 1882.

The Truth about Opium. By WILLIAM H. BRERETON, late of Hong Kong. London: W. H. Allen and Co. 1882.

The Opium Habit, its Successful Treatment by the Avena Sativa. By E. H. M. SELL, M.D. A paper read before the New York State Medical Society. Reprinted from the *New York Med. Gaz.*, April 22, 1812.

THE first work on our list is published under the auspices of the Society for the Suppression of the Opium Trade, of which Sir James Risdon Bennett is one of the vice-presidents. It purports to be 'an impartial collection of medical evidence'; and 'the Committee,' we are told, has not thought it right to withhold some opinions from which it dissents.

Sir Rutherford Alcock, who lived for nearly twenty years in China, apparently holds no high opinion of the Society in question, for he says: 'I wish to speak with all respect of the high dignitaries, civil and clerical, who have given their names in aid of this movement. They are great authorities in their own spheres, and, as no one doubts their good faith or good intentions, there is a natural reluctance to question the wisdom of their acts. Nevertheless, in such a discussion as they have actively promoted

concerning the opium trade, its history, conditions, and influences, it is scarcely a disparagement to say that they cannot be supposed to have any great knowledge of the subject. It is one that cannot be mastered in a few hours' study; and when they give circulation in their speeches to exaggerations of the most mischievous and misleading character, it must be assumed that they speak from the briefs furnished them by others. But they cannot on that account be entirely acquitted of responsibility for the truth of the statements to which they lend their names.'

Mr. Brereton, who lived for nearly fifteen years in Hong Kong, expresses very similar sentiments, for he speaks of the Society as being supported 'by some of the most influential people in England, noblemen, archbishops, and other dignitaries of the Church, clergymen of all denominations, people justly and deservedly commanding the respect of the entire community, but who, on this opium question, know little or nothing, who implicitly believe all that is told them by the agents of the Society, but otherwise have no knowledge of the facts.' Mr. Brereton, speaking from personal observation, is confident that most of the statements made respecting the frightful effects of opium-smoking are grossly exaggerated. He says: 'For myself, I may say that I have taken a very great interest in the subject, particularly during the last five or six years. I have tried, and tried in vain, to find out those pitiable victims of opium-smoking who have been so much spoken of in books, in newspapers, and on public platforms. I have gone through the most populous parts of Hong Kong—which is a large city, having about 150,000 Chinese inhabitants—in both the wealthiest and poorest quarters. I have had in my office day after day Chinese of all classes, seeing them, speaking to them, and I have never found amongst them any of these miserable victims to opium-smoking.' He adds: 'Many people in this country, I dare say, think, if they went to Hong Kong, they would see swarms of wretched creatures, wan and wasted, leaning on crutches, the victims of opium-smoking. If they went to the colony, they would then be greatly disappointed, for no such people are to be met with. On the contrary, all the Chinese they would meet are strong, healthy, intelligent-looking people, and, mark my word, well able to take care of themselves.' Mr. Brereton's work is furnished with a collection of interesting appendices relating to the opium question.

The remedy to which Dr. Sell ascribes such remarkable properties (*New York Med. Gaz.*, April 22) is a tincture of common oats. He begins by telling us that it is a very important grain, and then gives us a long history of its cultivation and uses from the time of Pliny to the present day. He discourses, too, at some length on the value of water-gruel and oatmeal-tea. He next tells us that in 1874 Dr. Keith 'had a concentrated tincture of the avena prepared for paralysis, from the effects of which he himself suffered for three years and a half, and in three weeks, having taken the avena in fifteen-drop doses three or four times a day, he was not only free from paralysis, but relieved from many serious symptoms, both mental and physical'.(!) The author commenced his own observations with the concentrated tincture before hearing of Dr. Keith's case. He is convinced that it is 'a most useful and reliable remedy'. He finds that it is 'diuretic, slightly laxative, tonic, stimulant, but especially nerve-stimulant.' It is said to 'exert a most powerful influence upon and through the nervous system'. It is 'a valuable

adjuvant to other medicines', is unsurpassed in 'female diseases', is 'an excellent substitute for intoxicating drinks', will cure inebriety', is 'an antidote to opium-poisoning'. (!) It gives relief in insomnia, and is curative in nervous headache and prostration due to mental strain and worry, and also in neuralgia and hemiplegia. 'Epilepsy has been brought under subjection by it more effectively than by other remedies', and it is unequalled in the treatment of 'hysteria, melancholia, neurasthenia, and all forms of nervous prostration, whether caused by inebriety, the abuse of tobacco, opium, or morphine, by sexual excesses, masturbation, or mental strain'. But this is not all, for the author has made what he describes as 'a no small discovery in therapeutics'. He finds that this remedy is an absolute cure for the opium or morphia habit. He gives details of three cases of morphia-taking, all of which were promptly cured by his remedy. The first patient, a German, of middle age, usually took hypodermically in the twenty-four hours from 12 to 48 or 50 grains of morphia, which had no other effect than to produce fifteen minutes' sleep with the eyes wide open. The next patient, a middle-aged lady, had been a slave of the morphia habit for seven years, and usually took 12 grains a day. In the third case, morphia had been taken to excess for twenty years, the average being an ounce in fifteen days, or 32 grains a day. The *avena* in all cases works wonders. The patients are not only able to relinquish the habit, but improve in weight, strength, spirits, and mental capacity. One lady not only gained twenty-five pounds in weight in an incredibly short time, but said she felt twenty years younger. It is stated in the most positive terms that the preparation is nothing but a tincture of common oats. The dose is to be increased till it produces 'the desired effect', and it is to be given in hot water, 'with the same frequency that the patient was accustomed to take his opium or morphia'. The author displays great originality, and his powers of imagination are remarkable.

WILLIAM MURRELL, M.D.

Medical and Surgical Aspects of In-Knee (Genu Valgum); its Relation to Rickets, its Prevention, and its Treatment with and without Surgical Operation. By W. J. LITTLE, M.D., F.R.C.P., assisted by E. MUIRHEAD LITTLE, M.R.C.S. London: Longmans, Green and Co. 1882.

IN these days of brilliant operations, when osteotomy seems to be considered by many surgeons as the most desirable, or even the only efficient treatment for genu valgum, it is interesting to read the records of the experience of such a veteran of orthopædic surgery as Dr. Little. The opinions of the man who, by his pluck and perseverance, obtained relief from his own distressing deformity, in opposition to the advice of the leading surgeons of the day, and to whose exertions we owe the establishment, upon a scientific basis, of the treatment of deformities in this country, are, at least, worthy of consideration. Ever since the establishment of the Royal Orthopædic Hospital in 1838, Dr. Little has been actively engaged in treating orthopædic cases; and genu valgum has received, from him, considerable attention. We may, therefore, accept with confidence his assertion that, although during the last few years many hundreds of cases of in-knee have been considered by surgeons to require for their cure violent methods of treatment or serious operations, yet, with all his experience, he

has 'never met with a case that did not recover by the help of instrumental means alone'.

It is especially gratifying to the writer of this review to find that Dr. Little's matured experience confirms the views upon the treatment of genu valgum, which have been lately published by him.

Dr. Little deprecates 'the practice of performing osteotomy at all in young children, for one of the best of reasons, that their bent knees and bones easily permit straightening by gentle, painless, prompt, and safe mechanical means'; and, with regard to adolescents, he considers that osteotomy is unjustifiable, 'unless adequate skilful instrumentation has been tried in vain'. The resort to osteotomy has frequently been defended by the assertion that previous instrumental treatment has failed; but such failure Dr. Little considers due to want of care and mechanical skill on the part of the surgeon. 'It is lamentable,' he writes, 'that surgeons have not investigated and discovered the cause of their own failure, and carefully applied instruments themselves, or superintended as well as directed their application, and, in fact, given as much care to the "setting" of a distorted as of a broken limb. The surgeon has, in fact, too often handed the case to the instrument-maker'.

The Listerian system of antiseptic surgery has divested osteotomy of so many of its dangers, and made it so brilliant an operation, that many surgeons seem to ignore the possibility of evil resulting from its performance. But yet all surgeons, as Dr. Little remarks, 'do not speak of osteotomy for in-knee with equal *couleur de rose*'.

The advocates of osteotomy have been foremost in asserting that the chief anatomical cause of the deformity is enlargement of the internal condyle of the femur. Dr. Little urges that the shape of the joint is produced by pressure upon the outer parts of the articulation. Without entering further into this controversy, we may say that, to support the theory of enlarged growth of the internal condyle, its advocates have assumed that rickets is the usual, or even the constant, cause of this supposed overgrowth.

Dr. Little has brought forward abundant evidence to prove that a large number, or the majority, of cases of in-knee, occur quite independently of rickets. Dr. Little states that congenital in-knee, a rare affection, is commonly rachitic, but non-congenital cases are usually atonic. They may, however, arise from accident, from muscular error, from over use, from rachitis, or from rheumatic, strumous, or traumatic knee affections.

'Simple in-knee from weakness attacks tall children, and does not lead to shortening of their stature. Rickety genu valgum is met with only in individuals stunted from rickets, *i.e.*, shortened, more or less, according to the intensity of that disease.'

'Simple or weak in-knee occurs independently of the presence of signs of rickets. Rickety in-knee is accompanied with constitutional and local signs of rickets elsewhere; rachitic bone-curvatures, for example, rickety teeth, rickety face and skull, restricted growth.'

This subject of the origin of genu valgum is well argued by Dr. Little, and his remarks are full of practical facts, which show that the assertion that rickets is the constant cause of genu valgum, is not tenable. The details of treatment by gentle means are given in this volume, and many other points in connection with the deformity are discussed. In urging the beneficial effects of treatment by means of splints or irons, the author refers to the lectures upon

the subject which he published in the *Lancet* in 1842-3, and adds that, 'notwithstanding the publication of these experiences a generation ago, a justly distinguished surgeon has written, as to this matter, that "he had heard it said that cases could be cured by mechanical means, but he had had no experience of it"'. It is scarcely necessary to add that Dr. Little admits the necessity of osteotomy in some old standing cases in adults, if the deformity is to be cured.

E. NOBLE SMITH.

Lehrbuch der Krankheiten der Peripheren Nerven und des Sympathicus. Von Dr. O. Seeligmüller. 8vo. Pp. 398. Braunschweig: Wreden. 1882.

THIS work, besides giving an excellent account of the diseases of the peripheral nerves, which extends over 250 pages, contains an useful chapter on the general therapeutics of nervous diseases, and deals with the so-called diseases of the sympathetic. Under the last heading are included, besides the vague symptoms of headache, abdominal neuralgia, and the like, well marked types like exophthalmic goitre, migraine, angina pectoris, facial hemiatrophy, herpes, together with vaso-motor disturbances. The author, however, does not classify these 'membra disjecta' under such a heading with any preconceived theory as to their still obscure pathogeny, but rather as a matter of convenience.

The diseases of peripheral nerves include the 'anatomical' and 'functional' forms. Here, again, the classification must be accepted with reserve. For instance, among 'functional' paralyses we find facial, saturnine, and other palsies, in which the nerves are notoriously the seat of profound histological changes.

The 'general therapeutics', though given concisely, are described sufficiently clearly as to be of practical service. The physical agents, electricity and heat, gymnastics, massage, and hydrotherapy are allowed the prominent position they occupy in the treatment of nervous diseases.

The author had a difficult task before him. The subject he had to treat with in the space above mentioned would, in the hands of a mere compiler, have become a bare nomenclature devoid of life and interest. Dr. Seeligmüller has known how to infuse both into his pages without sacrificing any point of importance to the undue amplification of special headings. Everywhere we find the traces of the careful and experienced observer, as well as of the informed writer. Though here and there he expresses himself in a way which does not altogether agree with our views, yet the points where this happens are of secondary importance only. It would be as useless to enter here into controversies upon, or detailed criticisms of, these few points, as it is impossible to praise individually the many excellencies of the work.

Dr. Seeligmüller's style is clear, and the book well got up—two important recommendations in the eyes of the English reader. The illustrations, about sixty in number, might, we think, have better been made to illustrate various forms of paralyses, etc., rather than the now hackneyed electrical instruments and 'motor points'. Most readers of this volume will surely be in possession of one of the numerous illustrated treatises of electro-therapeutics now in existence. On the other hand, a good picture will do more to make clear the deformity characteristic of paralysis of the serratus magnus, for instance, than pages of description.

We recommend Dr. Seeligmüller's book as a safe guide and pleasant companion to all who wish to improve their knowledge of the subject now before us.

A. DE WATTEVILLE.

Ueber Lungen-Syphilis. Erfahrungen aus der Praxis. Von Dr. F. W. T. PANCRITIUS. Pp. 295. Berlin, 1881.

THIS monograph deals with the subject of syphilitic disease of the lungs, chiefly from a clinical point of view, and is based upon a large number of cases which have been treated by the author, a general practitioner in Berlin, in his private practice.

The first part of the work contains sections on the history, etiology, pathology, symptoms, diagnosis, prognosis, and treatment of syphilitic affections of the lung, together with a copious bibliography and quotations from the writings of many of those who have written on the subject.

Dr. Pancritius defines syphilitic pneumonia to be a disease which is characterised by hyperplasia of the interalveolar and peribronchial connective tissue, and which only secondarily and at a later period involves the parenchyma of the lung, as the process spreads outwards from the hilus which is the starting-point of the morbid change. The physical signs are thus at first confined to the corresponding middle portion of the chest, and this localisation of the disease at an early stage is considered to be a valuable diagnostic sign. The course of the affection is divided into two stages—an active or irritative, corresponding to the period of cell-proliferation and growth; and an obstructive or passive stage during which the newly formed tissue undergoes degeneration and cirrhosis. The disease usually runs an apyretic course, and the right lung is more frequently affected than the left.

The second and larger portion of the book is occupied by full reports of a hundred and five cases, in which syphilitic disease of the lungs was diagnosed. In seventy-six of these, the right lung only, and in eighteen the left only, suffered; whilst in the remaining eleven instances both organs were affected. Sixty of the patients recovered or improved under treatment, and forty-five died. In twenty-eight of the fatal cases, no examination after death was made, but in seventeen the *post mortem* appearances are recorded.

The author has evidently spared no pains in the preparation of his work; and, though there may be difference of opinion as to the nature of the lung-affection in some of the cases, there can be none with regard to the care and minuteness with which the reports are drawn up, and the thoroughness with which the literature of the subject has been investigated.

ARTHUR COOPER.

Das Blasenepithel bei Verschiedenen Füllungsständen der Blase. Von Dr. B. LONDON. Aus der Physiologischen Institut zu Leipzig. 1881.

On the Epithelium of the Urinary Bladder in the Various States of Repletion. By Dr. B. LONDON. 1881.

THE influence of dilatation of the urinary bladder on absorption by its mucous membrane has received a good deal of attention, both by surgeons and physicians. It is obvious that the variation in thickness of the epithelium lining the mucous membrane is of importance as regards the greater or lesser facility with which absorption is carried on,

since all matter to be absorbed by the mucous membrane must necessarily traverse the epithelium.

That the epithelium, as a whole, is capable of change, owing to a variation in the state of dilatation or contraction of the organ, and that, under these conditions, the shape of the individual epithelial cells undergoes marked alterations, has been proved, some years ago, by Dr. Klein, with regard to the epithelium covering the pulmonary pleura, the epithelium lining the bronchial mucous membrane, and the stratified epithelium lining the mucous membrane of the urinary bladder. (See *Lymphat. of the Lung*, 1875; Structure of cells in *Quarterly Jour. of Microscop. Science*, April 1879.)

Dr. London of Carlsbad now furnishes us with precise data as to the change in thickness of the epithelium in various states of repletion of the bladder. He finds, from exact measurements of the thickness of the epithelium of the hardened mucous membrane preserved in definite states of repletion, that the thickness of the epithelium decreases from the moderate to the highest degree of repletion in the same manner as the surface of the mucous membrane increases in extent. A further important result is the fact that, in this diminution of thickness, the volume of the individual cells composing the epithelium remains always the same, but, of course, the cells undergo a change in shape. Since, at a high degree of repletion of the bladder, the same number of cells has to cover a greatly increased surface, the individual cells become markedly flattened and broader, without there ever occurring any discontinuity between them. E. KLEIN.

On Diet and Regimen in Sickness and Health, and on the Inter-dependence and Prevention of Diseases, and the Diminution of their Fatality. Seventh edition, revised and enlarged. By HORACE DOBELL, M.D., Consulting-Physician (late Senior-Physician) to the Royal Hospital for Diseases of the Chest; Consulting-Physician (late Physician) to the Royal Albert Orphan Asylum, etc. London: H. K. Lewis. 1882.

WHEN a work has passed through seven editions it needs no detailed notice. We have no hesitation in saying that the present volume is quite equal to its predecessors. We have read it carefully and attentively, and not without interest. Probably the best chapter in the book is the collection of receipts. The substitute for lobster salad made by cutting turbot into slips and colouring the outside with beet-root is excellent. The extracts from the works of others are of value, and will be read with pleasure. The author is to be congratulated on the care displayed in their selection. The volume is handsomely bound and printed on good paper.

W. MURRELL, M.D.

Statistical Tables of the Patients Under Treatment in the Wards of St. Bartholomew's Hospital during 1880. London, 1881.

University College Hospital. Report of the Surgical Registrar, and of the Resident Medical Officer, for 1880. London, 1881.

WHEN the 'Association of Registrars of the Metropolitan Hospitals' was founded, in 1880, it passed several resolutions. One of these pledged it, 'if possible, to compile, on the same model, a combined index of cases admitted into the metropolitan

hospitals during the year'. The two reports before us are the first efforts to fulfil this resolution which we have met with. They differ widely between themselves, for, while St. Bartholomew's Hospital professes to supply merely statistical tables, the volume which emanates from University College Hospital gives us a genuine insight into the work of the institution. In both instances, the basis of the report is a table of diseases classified according to their nature, and showing in three columns the total number of cases, the number discharged, and the number dying of each disease; the sexes are distinguished in the two latter columns. In the Report of the Surgical Registrar at the smaller hospital, this table serves the purpose of an index to a copious 'Appendix', which forms the bulk of the volume. This appendix consists of abstracts of all the more important cases; where a *post mortem* examination was performed, the clinical and anatomical observations are placed side by side, in parallel columns. Some of these abstracts are of great interest, while others appear to us hardly worthy of the labour which must have been expended on them; for instance, the details of the cases of cellulitis are not of much interest, and are sometimes hardly intelligible. Mr. Boyd has supplied eight sub-tables, all of which are valuable as contributions to the statistics of surgery; this remark applies especially to the tables dealing with Stricture, with Pyæmia and the allied conditions, and with the Amputations; the latter table includes a summary of all the amputations for the ten years 1871-1880. The registrars at St. Bartholomew's Hospital furnish a similar table, but it is of less value, owing to their having failed to distinguish, in the amputations of the thigh, the part of the limb at which the operation was performed. It is generally acknowledged that the mortality varies greatly, according as the limb is removed in the upper, middle, or lower thirds of the thigh. The appendices to the tables, compiled by the medical and surgical registrars at St. Bartholomew's, are very short, and deal with but few cases; on the other hand, the main table is fuller, inasmuch as it specifies the ages of the patients in eight periods, viz., under 5, from 5 to 10, then in decades to 60, and, lastly, over 60. In the case of some diseases, this is of great importance; for instance, we see from it that, of the 91 cases of enteric fever, but 2 occurred under five years of age, and that one of these was fatal; and that of the 25 cases of diphtheria, 15 occurred under 5 years, and that of these 12 were fatal. Tracheotomy was performed 13 times in this disease, with 4 recoveries. Dr. Champneys has much facilitated reference by making use of thick type in recording the fatal cases. Dr. Bond, at University College Hospital presents us with an appendix dealing with the cases of New Growths, in which the *post mortem* appearances are rather fully given, and also a table of the cases of Leucocythæmia.

DAWSON WILLIAMS, M.D.

Congrès International de Laryngologie. Première Session. Compte-Rendu. Publié par Charles Labus. Milan: Septembre 1880.

THIS volume, recently published by the President of the International Congress of Laryngology, Dr. Charles Labus, from the report prepared by the Secretary, M. Frua, furnishes a full account of the papers that were read, and the discussions that ensued at the First Session of the International Laryngological Congress, held at Milan in September

1880. The Congress lasted five days, and numbered 122 members, of whom forty-four were present. Among the latter may be mentioned the names of Drs. Krishaber, Stoerk, Schnitzler, Massei, Fournié, and Labus.

A considerable quantity of work was got through, the number of papers amounting to over forty. Abstracts of those of chief interest have already been given in the LONDON MEDICAL RECORD; but there are several others which would repay perusal by those engaged in the specialty. Not the least interesting part of the volume consists in the report of the discussions which followed the reading of the various papers; as from these we have the opportunity of learning the opinions and experiences of some of the chief authorities on the subject, as well as those of the author of the paper. The instruments and apparatus, amongst which may be specially mentioned the mannikin of Dr. Labus for practising operations on the larynx, that were displayed at the Congress, are also described. The volume consists of 225 pages, and is published at the moderate price of ten francs.

NEW INVENTION.

SEARCHING FOR STONES.

Dr. F. N. Otis, in reporting to the Academy of Medicine, April 1882, a case of encysted stone removed by medium lithotomy, suggested the following simple device for lengthening the finger and thus facilitating the search for stones so situated as to be beyond the reach secured by the unaided finger.

It consists of copper wire so attached to the forefinger of the operator as to form a loop at its extremity—an increased sweep of an inch or more is



thus obtained, and the tactile sense with the attachment is very little inferior to that of the finger without it. The wire is rendered secure by simply twisting it about the finger, hand, and wrist.

The applicability of this device to those cases in which the stone is sacculated or immured, and at a distance from the vesical orifice is at once evident. More thorough exploration in cases of suspected tumours, etc., is thus made possible. The same appliance promises, also, to prove of service in removing foreign bodies from the throat as well as in explorations of the uterus, and in detaching and removing growths from the interior of that organ.

WARNER'S PARVULES.

We have received from Messrs. W. R. Warner and Co. of Philadelphia specimens of their parvules, a term applied to a new class of remedies in the form of minute pills, containing minimum doses, for frequent repetition in cases of children and adults. Dr. Sidney Ringer, in his recent work on *Thera-*

peutics, lays great stress on the efficacy of minimum doses of corrosive sublimate; and a large experience of professional men endorses the certain action of parvules of podophylline, in constipation due to a torpid action of the liver with deficient biliary secretion. Drs. Peter of Paris, Bartholow, Dessan, and others cite numerous cases of disease wherein they brought about a desired result by the adoption of minimum doses. For this class of treatment, the parvules are especially adapted, upwards of forty varieties being prepared in this form.

Messrs. Warner have also submitted to us some most convenient and neatly got-up physicians' pocket-cases, containing a collection of ten and twenty different sorts of the parvules in the ordinary sized bottles, making, in the case of the larger one, a complete little pocket compendium of pharmacy, enabling him to administer a dose on the instant to his patient, and so avoiding the time lost while waiting for the preparation of prescriptions. Messrs. Newbery and Sons are the London agents for both parvules and pocket-cases.

DIETETIC NOVELTY.

SPANISH LIGHT WINES.

It is now tolerably certain that Spanish light wines will compete with French productions in the future in the English market. Our present remarks are intended to apply to wines of the sherry character, for which the Iberian peninsula has, and we believe must, stand pre-eminent. It is quite evident that, guided in a great measure by the advice of the medical profession, a taste is daily gaining strength in favour of light over the heavy alcoholised wines that pleased the palates of our fathers. 'Natural' sherries, so named because they are presumed to be the virgin production of the grape, appear to be the 'coming' feature from the Spanish vineyards; and if we exclude the 'high-class' sherries, for which there is comparatively little demand, the natural sherries are doubtless far more beneficial to the system than the highly brandied liquids we have for many years been obliged to accept as sherry. The wine now under consideration, 'Virgin Montilla' the name that its importers, the Cadiz Wine Company, of Duke Street, St. James's, have given to it, is well worthy of attention. As a delicate light wine for luncheon, or even dinner, it will doubtless find numerous admirers, and to delicate constitutions, to whom the ordinary sherries are unsuitable, it is decidedly preferable. It contains but about 26 per cent. of alcohol, is clean on the palate, pleasing to the taste, and may be pronounced a valuable dietetic. Its price is 21s. per dozen.

OUR INTENDED DIARY.

PUBLISHERS' NOTICE.

As applications and inquiries are now constantly reaching us from the bookselling trade and private persons in various parts of the country and abroad, as to their eligibility to participate in the gratuitous distribution of our Diary for the next and succeeding years, we consider it necessary to make known the terms on which it will be published.

Those who pay their subscriptions direct to our publishers, will experience no difficulty in the matter; the Diary, so soon as published, will be forwarded to them free, and all persons who may forward their subscriptions to us on or before the 1st December will be entitled to the work for the year 1883; but we cannot guarantee it to those who do not subscribe by that date. Still, every person sending in his subscription for a year in advance will be entitled to *one* Diary; but if a subscription be not paid in before January 1883, the sender will only receive a Diary for the year 1884. Large numbers of the LONDON MEDICAL RECORD are ordered monthly by booksellers throughout the country, and we cannot be expected to know if these are sold consecutively to the same persons, neither can we undertake to look upon booksellers who may order, say one dozen copies per month, as annual subscribers to the extent of their monthly purchases. The onus of proving to our satisfaction that this or that purchaser of the journal is a subscriber in the strict sense of the term must rest with the purchaser himself. We cannot, however, entertain applications of this character direct from persons who purchase it month by month from the trade. At the same time, it is our wish and intention that every individual who has taken the journal in this manner for *a year preceding* the publication of the Diary should have a copy of it sent to him free. To carry out this intention, it will be necessary that applications be made to us *through the booksellers* who have supplied the work, and on receipt of satisfactory vouchers from them, and the names of the parties to whom the work has been supplied, a copy of the Diary will be sent to each individual direct. With reference to future years, in relation to those who prefer ordering through their booksellers, the plan we propose to lay down, and which will not only avoid after-complications, but give less trouble to the tradesmen supplying the journal, is this. On the application of any person to subscribe to the LONDON MEDICAL RECORD through a bookseller, such bookseller should request him to pay the amount of the annual subscription at the time of application, and to intimate the payment to our publishers, when the name of the recipient will be at once entered upon our books as an annual subscriber, and all after-difficulties avoided; the bookseller of course remitting the amount at the time of such intimation. It is absolutely necessary that a clearly-defined plan should be established. The work in question will cost us a large sum in the preparation, and we cannot be expected to distribute it broadcast to every person who purchases an occasional number of the LONDON MEDICAL RECORD through a local bookseller.

MISCELLANY.

AN ETHNOLOGICAL MUSEUM is now thoroughly organised at the Trocadero in Paris. It possesses 44,000 ethnological specimens, of which 14,000 are classed. The classification is being made under the superintendence of Drs. Hamy and Gaudren, and will soon be completed. Owing to the efforts of M. Jules Ferry, the Ethnological Museum was, two years ago, put down in the Budget for 20,000 francs (£800).

COLLEGE FOR MEDICAL PRACTITIONERS.—A college has been inaugurated at St. Louis to teach medical practitioners, by practical instruction, the special branches of medicine and surgery. There will be twelve departments, so arranged that special courses may be taken with as little loss of

time as possible. The following gentlemen have been elected to fill a part of the departments:—T. F. Rumbold, M.D.; E. Borck, M.D.; W. Hutson Ford, M.D.; W. Dickinson, M.D.; W. B. Outten, M.D.; Colonel F. T. Ledergerber, Attorney-at-Law; C. H. Hughes, M.D.; and other gentlemen, who also have had especial advantages in their departments, will be added. Particulars may be had of the dean, Dr. T. F. Rumbold, 1,225, Washington Avenue; or of the Secretary, Dr. E. Borck, N.E. corner of Fourth and Market Streets, St. Louis.

A NEW APPARATUS FOR TAKING TRACINGS.—M. D'Arsonval has invented an apparatus for taking tracings at a distance free from rubbing. The smoke or soot is stored in an India-rubber bag, or produced by a current of air issuing from a gasometer, or a bag full of gas. Tinder, or the leaves of certain plants, answer equally well, likewise the smoke of a lamp or a smoky candle. The registering stylus is hollow, and the smoke passes along the rotatory axis. In another kind, the stylus moves along with the tracing paper, and the jet of smoke is stationary. M. D'Arsonval made a communication to the Biological Society, in which he says that the instrument can be varied in numerous ways.

ACTION OF THE ELECTRO-MAGNET ON FERMENTATION.—M. D'Arsonval has observed that, if a strong solution of cane-sugar, containing yeast, be placed between the two poles of an electro-magnet, the fermentation is considerably delayed. The intestinal ferment has the same effect as yeast. Other reactions, purely chemical, are either arrested or effected more slowly. M. D'Arsonval will make some further communications concerning these phenomena, showing how those produced by treating hysterical patients by electricity and magnetism can be explained.

DISINFECTION OF URINE.—In the *Medical Annals*, Dr. E. C. Curtis states that hydrate of chloral has the property of disinfecting urine. In August last, he received a specimen of urine, four ounces, containing five grains of chloral to the ounce. No special care was taken to facilitate its preservation. It was simply corked, and was several times opened. Some months afterwards, it was perfectly transparent, of a clear amber colour. A slight semi-flocculent deposit covered the bottom of the vial. It was of specific gravity 1.015, acid; albumen, one-and-a-fourth. The preservation of the albumen was a marked test. On microscopic examination, the epithelial cells were as perfect as in recent urine. No casts were seen. The specimen seemed to be quite the same as when freshly voided.

MR. A. W. HOOD, member of the Rochester Naturalists' Club, has been able to add to the Jermyn Street Museum of Geology two specimens of polyzoa new to Britain, for which he has received the special thanks of the Lords of the Committee of Privy Council on Education on behalf of Her Majesty's Government. They were obtained from the Borstal chalk.

QUININE FROM THE WEST INDIES.—The efforts of the Government of Jamaica to introduce the cultivation of the cinchona tree into that island promise to be as successful as those of the Government of India, and may be expected in time to contribute powerfully to lower the high price of that invaluable drug quinine. Governor Sir Andrew Musgrave, in his report just published, directs attention to the fact that this year the article, which used to be known in commerce as 'Jesuits' or 'Peruvian' bark, appears for the first time in the list of West Indian exports. The bark sent away during the year, amounting to 23,981 lbs., of the stated value of £7,202, was chiefly the produce of the Government plantations. Sir A. Musgrave observes that a great impetus has been given to the cultivation of this valuable tree by the success attending the experiment undertaken by Government, and it may be confidently hoped that in the course of a few years the export of cinchona bark will rank high on the list of exports. It is added

that there is a large quantity of land available which is well suited for the growth of cinchona, for the acquisition of which, on liberal terms, facilities have recently been offered by public notification.

FELLOWSHIPS FOR THE ENCOURAGEMENT OF STUDY AND RESEARCH.—An anonymous donor has placed at the disposal of the *Senatus Academicus* of Edinburgh University a sum of money to be applied by them in providing 'Elective Fellowships for the Encouragement of Study and Research'. There will be four fellowships (open to any graduate of a Scottish University), of the value of £100 each for one year, but renewable for one or two further years, at the pleasure of the *Senatus Academicus*; and the regulations are as follow.—'1. There will be no examinations for election to these fellowships, but Fellows will be elected by the *Senatus Academicus* after consideration of the qualifications and circumstances of the applicants. 2. These fellowships are open to any graduate of a Scottish University not being more than thirty years of age at the date of application, and provided that he be not an assistant to any professor, or an examiner in any department. 3. The fellowships are intended for persons having attained some proficiency in, and who are desirous to prosecute, unprofessional study and research in one of the following subjects: i. Mathematics (pure or applied), or experimental physics; ii. Chemistry; iii. Biology; iv. Mental philosophy; v. History, or the history of literature. 4. Persons desiring to hold one of these fellowships should address an application to the Secretary of the *Senatus Academicus*, to be received by him on or before the 1st October 1882,' etc.

THE CONSTITUENTS OF TOBACCO-SMOKE.—A series of experiments has been recently conducted by Herr Kissling of Bremen with the view of ascertaining the proportions of nicotine and other poisonous substances in the smoke of cigars. In his paper, which is published in *Dingler's Polytechnisches Journal*, he specifies, as strongly poisonous constituents, carbonic oxide, sulphuretted hydrogen, prussic acid, picoline-bases, and nicotine. The first three occur, however, in such small proportion, and their volatility is so great, that their share in the action of tobacco-smoke on the system may be neglected. The picoline-bases, too, are present in comparatively small quantity; so that the poisonous character of the smoke may be almost exclusively attributed to the large proportion of nicotine present. Only a small part of the nicotine in a cigar is destroyed by the process of smoking, and a relatively large portion passes off with the smoke. The proportion of nicotine in the smoke depends, of course, essentially on the kind of tobacco; but the relative amount of nicotine which passes from a cigar into smoke depends chiefly on how far the cigar has been smoked, as the nicotine-content of the unsmoked part of a cigar is in inverse ratio to the size of this part, *i.e.*, more nicotine, the shorter the part. Evidently, in a burning cigar, the slowly-advancing zone of glow drives before it the distillable matters, so that in the yet unburnt portion a constant accumulation of these takes place. It would appear that in the case of cigars that are poor in nicotine, more of this substance relatively passes into smoke than in the case of cigars with much nicotine; also that nicotine, notwithstanding its high boiling point, has remarkable volatility.

RESEARCHES ON LUNG-DISEASE.—M. Gibouy has lately experimented with four young rabbits of the same litter, and born of healthy parents. Two of them were kept 105 days in a large wooden case, with side gratings, into which was introduced daily a quantity (about 20,000 cubic centimètres) of air expired by animals in a consumptive state. This operation was performed at midday and in the evening, and each time the gratings were kept closed for two hours. In another quite similar case, the two other rabbits were similarly treated, except that the impure air was made to traverse in its way to the case some wadding impregnated with carbolic acid. The rabbits in the first case, before long, showed loss of appe-

tite, intense thirst, listlessness, diarrhoea, and loss of flesh. On being killed, both were found to have tubercles in the lungs, the liver, and the kidneys, those in the lungs being the most advanced, and the upper lobes being chiefly affected. The other couple of rabbits presented nothing abnormal while alive, and no organic alteration was observed in their organs after death. They were eaten without repugnance by the author and his family. Again, observations have been recently made by MM. Gréhaut and Quinquand, both on man and the lower animals, regarding the influence of injuries of the lungs (or of the bronchiæ or the pleural envelope) on the exhalation of carbonic acid. They prove that the amount of this gas exhaled is less where such disorder exists, even where there is fever. Two explanations are conceivable; the pulmonary change might bar the elimination of carbonic acid, which, in that case, would accumulate in the blood, or the injury might have the effect of diminishing the production of carbonic acid by affecting the general nutrition. Experiment favoured the latter hypothesis.

RESEARCHES ON DEAF-MUTISM.—A discussion has lately taken place as to whether deaf-mutes taught to speak do so with the accent of their native district. M. Hément affirmed this in the French Academy, from personal observation, and noted the interesting nature of the fact (as he thinks it) of dialectal accent being hereditary. Mr. Axon has supported this view by other recorded cases, one being in an old number of the *Philosophical Transactions*—a congenital deaf-mute, who, when a young man, gradually acquired hearing and speech after a second attack of fever, and spoke with Highland accent; another, the case of pupils in deaf and dumb schools in Spain, observed by Ticknor to speak with distinct provincial accents; a third that of a deaf-mute taught by Mr. Alley of Manchester, and found to speak with Stafford dialect. On the other hand, M. Blanchard noted the harsh and disagreeable nature of deaf-mutes' speech, and thought their pronunciation had not the quality of accent. Professor Graham Bell says that in America this faulty utterance has been quite overcome; but, having examined the speech of at least 400 deaf-mutes, he has never remarked any such tendency as M. Hément affirms. In a few cases dialectal pronunciations were heard, but it always turned out that such children could talk before they became deaf. Professor Bell (in *Nature*, March 2) criticises the cases adduced. In that of the young Highlander there was probably imitation of heard speech. A large proportion of deaf-mutes, it is now known, have been able to hear in infancy, and many to speak, so it was an erroneous assumption of Ticknor that the pupils could never have heard a human sound. The youth taught by Mr. Alley became deaf at a very early age, but it is not said what age. M. Hément's data are also pronounced defective. M. Hément, further, has said he is unable to conceive how, in losing the use of speech, deaf-mutes should retain the unconscious memory of accent. Mr. F. I. Faraday (*Nature*) finds this conceivable as due to automatic activity of brain-tissue, and he cites a case in which a man, becoming deaf in one ear through typhoid fever, often seemed to hear with that ear entire sentences which had not been spoken. Turning from this, we note an interesting recent observation by Dr. Boucheron with regard to several cases of deaf-mutism in children, with accompanying giddiness, difficulty in walking, nervous cries, etc., which were treated successfully by a new method. Supposing that those troubles might be due to a compression of the acoustic nerve and the nerves of the semicircular canals (which are known to be closely concerned with bodily equilibrium), such compression being the result of vacuum existing in the cavity of the tympanum, so that the tympanic membrane is pressed in on the bones of the ear, Dr. Boucheron sought to destroy this vacuum by passing air into the cavity through the Eustachian tube. The children rapidly improved, being soon able to walk normally, regaining by degrees both hearing and speech, and improving generally in health and disposition.

The London Medical Record.

The Publishers of the LONDON MEDICAL RECORD invite offers of back volumes or sets of this periodical.

BEETZ ON THE TREATMENT OF SUBCUTANEOUS SUPPURATION AND OF GLANDULAR INFLAMMATIONS.*

As the inflammations of glands, especially those of a scrofulous nature, their chronicity, caseation, and tendency to induce tuberculosis, are at present occasioning much discussion, it is here unnecessary to dwell on the pathological significance of these processes.

If we inquire which method of treatment is the most correct, we find, on consulting the handbooks, that a healthy atmosphere, good nourishment, and constitutional treatment generally, are most usually prescribed. Sometimes we cannot treat the indications at all, as the patients may be only brought to us when already glandular inflammations, diseases of the joints and bones, and skin-affections, are well developed, or other troubles are in the way. The scrofulous habit has been described frequently as consisting in thickened upper lips and nose, sodden appearance of the face, and swelling of the neck; but these are really symptoms of the disease, of obstruction in the lymphatics and of venous obstruction. If we consider the time that an opened suppurating gland continues discharging a watery sanious pus, and after how long a period only a tendency to cicatrization is evident, or caseous metamorphosis has begun, we can certainly not condemn a method of treatment which is calculated to bring about the early resolution of the inflammations in question. It is now four years since Kappesser (an army-surgeon in Darmstadt), described his method in the *Berl. Klin. Woch.*, No. 6, 1878. It seemed to meet all moderate requirements; and he begged of his colleagues to publish the results which they obtained by using his line of treatment. Numerous corroborations by Hausmann, Klingenhöfer, and Kollman, soon appeared, Kappesser himself extending the indications in a more recent publication.

One of the first observations he made was in the case of a badly nourished, scrofulous little girl, whose neck, especially on the right side, was immensely swollen, and discharged copiously fetid pus from six or eight fistulous openings, there being also corneal ulceration, and no improvement by previous treatment. Recollecting a case in which, by ordering the inunction of soft soap for scabies, the phenomena of scrofulosis disappeared together with the scabies, Kappesser adopted this method once more; and with such success that in four weeks the unsightly swellings had been reduced to a few small easily movable glands about the neck, and the inflammation of the eye had subsided, leaving only slight haziness of the cornea. That this was no accidental result, was proved by the fact that the child returned to its bad condition during a period in which the physician had to be absent, and the

foster-parents discontinued the inunction; and also that, the moment it was resumed, improvement followed rapidly. When seen two years afterwards, the child was healthy and fresh in appearance, the haziness of the cornea was reduced to a minimum and only perceptible on one eye, sight being scarcely influenced; the cicatrices on the neck were smooth and firmly healed, with little contraction. Recently Kappesser has gone a step further, and treated phthisical patients with pleuritic exudations, hæmoptysis, night-sweating, etc., in a similar manner, with the result that there were cessation of the pathological processes, increase of body-weight, and return of the capacity for work (*Berl. Klin. Woch.*, 1882, No. 5.) He particularly wishes it to be understood that he has not invented a cure for phthisis; but that he has only found his method useful in certain chronic exudative and ulcerative processes.

Beetz has been able to give some results which have been achieved in von Ziemssen's clinic at Erlangen since 1873, in the treatment of swellings of glands with soft soap. In that year, he ordered a very scrofulous child to be rubbed several times with soft soap, as in no other way could cleanliness be kept up; and as he observed that the hard masses of glands vanished very rapidly under this method, he has used it very often since, and can corroborate Kappesser's observations. In addition to scrofulous tumours as well as inflammations in children, he has also used it in the lymphadenitis of adults; and, finally, in every case of subcutaneous inflammation, using different preparations of soap as the case required. To illustrate the method, a case is related. In February 1881, he was called to a child a few weeks old, which had high fever, and was covered with abscesses in various stages of development. In the left axilla an abscess had already burst; and the skin over this part of the thorax was so infiltrated, that the child hardly dared to breathe with this side. She was kept very clean, and had been properly nourished; but for three days there had been diarrhoea and loss of appetite. Without much hope, as the prognosis was undoubtedly bad, warm stupes, to be applied to the left thorax, were ordered, moistened with spiritus saponis kalinus. On the following day it was found that all the larger abscesses had disappeared, the skin-infiltration after this was not to be found anywhere, and of the abscesses in the course of development there was nothing to be seen except little pustules, which had either discharged their contents or showed a small apex about to rupture. Breathing had become normal; three days later it was not necessary to see the child any more. It is now perfectly healthy. The author does not imagine that he saved this child's life by his treatment; it might, he says, have recovered without any medication whatever, but it certainly would not have done so in as short a period of time. A whitlow, if not already too far advanced, yields very promptly to the influence of warm applications of spiritus saponis kalinus.* But one of the most satisfactory of affections to treat is bubo; and since Beetz has introduced his treatment, he has never found it necessary to treat buboes otherwise.

For the last nine years his treatment in certain affections has been as follows. For chronic glandular indurations or abscesses in places in which it is

* This preparation is a solution of two ounces of green soap in an ounce of alcohol, to which, after filtration, is added two drachms of spirit of lavender. An elegant preparation is obtained by dissolving the soap in Eau-de-Cologne.

* *Aerztliches Intelligenz Blatt*, No. 27, 1882, July 4.

difficult to apply dressings, he uses inunction in the evening with green soap, which is washed away the next morning, and repeated during three or four days with a subsequent interval of a day or more, according to the sensitiveness of the skin.

For acute glandular inflammations, whitlows, and abscesses in easily accessible positions, linen rags are steeped in spirit of soap, applied to the part, and covered with gutta percha paper. These dressings must be accurately applied, if they are to fulfil their object. For example, in inflammation of the inguinal glands, a good result can be expected only if the surgeon himself fixes the dressing with a spica bandage and safety-pins, not leaving it to the skill of the patient himself. There will be, not a tedious suppuration, but a very small abscess, with little or no trouble in walking (as there will be no infiltration). If we have to deal with a very delicate skin, or wish to avoid the unpleasant odour of the spirit of soap, the use of fluid glycerine soap is indicated, or *sapo kalinus albus* may be used, or even the 'crème d'amandes amères'. An elegant preparation may be made by using white soap instead of green in the manufacture of the *spiritus saponis kalinus*, and adding a little carmine, previously dissolved in a drop or two of liquor ammoniæ, which makes it very attractive to the eyes of children.

Reference has been already made to Kappesser's results; and Hausmann comes to the conclusion that, even in very old glandular tumours and diseases of the lungs, pleura, intestine, or even mesenteric glands, this treatment meets with success, in so far as these diseases are complications of the glandular affections of the neck. More astounding still are the results published by Kollmanns (who is surgeon to the female prison in Würzburg), which have particularly been obtained in the treatment of caries and periostitis. Some of these cases he showed to Professor von Bergmann, and amongst others published in the *Berl. Klin. Woch.*, 1881, No. 19, he relates a case of a bedridden patient, the subject of caries of the sternum and vertebræ, and another of the tarsal bones, both of which were cured by inunction of soap, and were enabled to return to labour. Twice a week in the evening, 15 grammes of green soap was rubbed on, and washed off after half an hour; in some cases the patients were able to walk about whilst under treatment. The advantages of such a cheap method of treating diseases like scrofula, which exist for the greater part amongst the very poorest classes, are quite obvious.

If we now examine into the method of the operation of these soap inunctions, we find, first, that soap cleans the skin by being split up into acid and basic salts by abundance of water. The excess of alkali in these salts combines with the fat of the skin, forming soaps which can be washed off by water. The capability of softening the cuticle rests with the alkali which is set free; and that this capability is possessed to a greater degree by potash than by soda, is known to us from microscopic observations, as well as from the fact that potash-lye is used in the process of tanning; hence it is best to use potash soaps only, and the potash soap-spirit.

The action of this inunction of soap on subcutaneous collections of pus can be readily explained by the softening which the caustic potash exerts on the skin; this is more energetic when the application is in a moist form (fomentation), as this brings

about an increased local blood-supply. The tension in the parts around the purulent collection relaxes; blood-stasis does not go on to diapedesis of white cells, but these can circulate in the blood, the rate of which has been quickened. The spot in which there is most pus has not the tension around it as before, and the lessened amount can easily push through the softened corium.

Sinitzin's beautiful experiments also prove that, in addition to the softening of the skin, a dilatation of the vessels takes place, which acts as a check to inflammation. In Brücke's *Vorlesungen*, Band ii, p. 81, Sinitzin's method of treating an artificial hyperæmia is thus detailed. If, during an ophthalmia, the result of cutting the trigeminal nerve, the superior cervical ganglion of the sympathetic be torn out, the inflammation at once ceases if not already too far advanced. If, on the other hand, the ganglion be first removed and the trigeminus then cut, inflammation does not take place at all; and, if both eyes be irritated by burying very fine glass threads in them and the ganglion be removed on one side, the healthy side will much more easily become inflamed than the side deprived of its ganglion. Hyperæmia and inflammation are not convertible terms: in the former, a greater amount of blood collects in the vessels; in the latter, excluding all other processes, it is blood-cells which collect in the vessels. In the experiments we see an inflammation in process of development, and we perform an operation which induces hyperæmia by itself, and this operation is a remedy for the inflammation which is the result of another operation (Brücke).

The author has as yet no results to offer concerning cold abscesses. The reaction in inflamed and chronic indurated glands must be the same here; the relaxation of tension gives opportunity for decrease in size and absorption of the contents of the gland.

Caustic potash is capable of destroying the structure of the tissues and penetrating deeply, as no other chemical caustic can; and, under its influence, albuminous materials are dissolved and can be carried away by the blood- or lymph-streams. It is probably in this way that a cure is brought about in suppuration of bone.

The reason why its influence should extend only to pathological products and not cause absorption in organs where it might not be desirable, is easily to be found in the fact that the action of the alkali can only be induced where there is not an abundant supply of blood to immediately dilute it; this condition being most easily fulfilled by abscesses and inflammations with stasis. According to this, it may be thought it would be better to use solution of potash at once; but Donders has proved that, although the elementary tissues are softened by strong solutions of caustic potash, yet they are not destroyed, whilst the weaker solutions have the power of attacking these; in any case, the fat of the soap acts as a protective to the skin, and perhaps prevents irritation.

Hausmann has very properly said that we should not neglect to give most careful attention to even the very slightest scrofulous affection, especially of the lymphatic glands. We must, therefore, continue to use those remedies which have been found of service, as cod-liver oil, baths at Heilbrunn, Tölz, or Kreuznach and Kohlgrub; but we must also devote some attention to a line of treatment which has already a very good history in the treatment of

scrofulous and tubercular affections, and which is without the danger of any pernicious after-effects; and this is the injunction of various preparations of soap.

F. WILLIAM ELSNER.

KOCH ON DISINFECTANTS.

R. KOCH (*Mittheil. der Kais. Gesundh.*, 1881, Band x; *Rep. der Analyt. Chemie.*, 1882, No. 1) has tested the ordinary disinfectants in three ways. 1. To ascertain whether a particular disinfectant is capable of destroying the resting-spores of bacilli (the latter form the greater part of pathological bacteria), which are the most difficult of all forms of life to destroy. Every disinfectant is to be removed from these list of the disinfectants which may be generally used in infectious diseases, when it cannot destroy the developing power of the resting-spores. The resting-spores of splenic fever were generally employed for experiment. 2. To ascertain how the disinfectant behaves with regard to more easily destructible fungi, yeast, bacteria, bacilli, and micrococci. 3. To ascertain whether the disinfectant is capable of arresting the development of micro-organisms in suitable alimentary beverages.

Carbolic Acid did not prove itself to be a sovereign disinfectant. A 5 per cent. solution only sufficed after two days to arrest the developing power of splenic fever spores; while a 1 per cent. solution destroyed in two minutes the bacilli themselves of splenic fever. A solution of 1 in 850 sufficed to check the development of the latter. A soaking, five to seven times repeated, in a 5 per cent. solution of phenol, was sufficient to only retard the development of the resting spores of splenic fever. The fact is very noticeable that carbolic acid in oil, or in alcoholic solution, is absolutely without effect on the bacilli and spores of splenic fever. The latter, after remaining 110 days and 70 days respectively, in a 5 per cent. solution of carbolic acid in oil and in alcohol, were repeatedly found intact. The same was the case with *Salicylic Acid* and *Thymol*. In the form of vapour, better results were obtained with carbolic acid, only at higher temperatures. But even the action of carbolic acid vapour at 75 deg. Cent. for two hours, failed to destroy the resting spores completely. Chemical combinations of carbolic acid with other bodies, or cheap raw products containing carbolic acid, were less efficacious than the pure preparation. A 5 per cent. solution of zinc sulpho-carbolate, destroyed the resting spores of splenic fever in five days; a 5 per cent. solution of sodium phenate (carbolate) in ten days merely reduced their power of development, while sodium sulpho-carbolate failed to do this within the same period of time. Crude wood-spirit, and pyroligneous acid in a concentrated state, destroyed the resting spores in twenty and two days respectively; while wood and coal-tar, in a moderately concentrated condition, had no effect.

Sulphurous Acid. Even under such favourable conditions as are not attainable in practice, sulphurous acid fails to destroy all minute living organisms. The experimenter says this is a very uncertain disinfectant, as is also calcium bisulphite.

Zinc Chloride. In spite of the prevalent opinion that a solution of 1 in 1000 of this agent is a safe disinfectant, it was found that even a 5 per cent. solution failed within a month to weaken the developing power of the splenic fever spores.

After testing various other substances, Koch con-

cludes that the only certain disinfectants are chlorine, bromine, and corrosive sublimate; and that to arrest development, only corrosive sublimate, certain ethereal oils, thymol, and allyl-alcohol are available. Bromine vapours are recommended for confined spaces. Chlorine is a little less satisfactory, but more so than was formerly supposed. In all places where neither gases nor heat are available, corrosive sublimate, and indeed all the mercurial salts are recommended. A solution of 1 per 1000 of the mercuric chloride, sulphate, or nitrate, killed the resting spores in ten minutes; and, indeed, simple moistening of the earth containing the spores with this solution is sufficient to arrest their power of development. Solutions of 1 in 1000, to 1 in 15000, are sufficient to kill micro-organisms. The poisonous action of such diluted solutions may be disregarded. The cost also is far below that of carbolic acid.

THOMAS STEVENSON, M.D.

VOLKMANM AND KRASKE ON THE RADICAL CURE OF CONGENITAL INGUINAL HERNIA IN THE MALE.

DR. P. KRASKE, of Halle, reports, in the *Centralblatt für Chirurgie*, No. 26, 1882, two cases of congenital scrotal hernia, in which, in the course of last year, Prof. Volkmann operated for radical cure. In both these cases, peculiar anatomical conditions were presented, and the necessity was indicated for a special operative treatment in future attempts to attain a radical cure of similar forms of congenital hernia. The numerous records, in surgical literature, of cases in which operations for radical cure have been performed, include several cases of congenital scrotal hernia, but no mention has hitherto been made of any special method of dealing with this latter form of hernia, with a similar object in view. In 1874, Mr. Steele, who was the first to apply Listerism in operations for the radical cure of hernia, described (*Brit. Med. Jour.*, November 7th, 1874) an operation which, though applicable to all forms of reducible hernia, was, in the first instance, practised on the subject of a hernia that was congenital. In this operation, the pillars of the external ring, after having been exposed and their edges scraped and roughened by the scalpel, were brought together by two or three catgut sutures, room being just left for the passage of the spermatic cord. This, if there were not two objections to it, might be regarded as the most suitable and advisable operation for the radical cure of congenital scrotal hernia. But it is applicable only in cases in which the hernia is reducible, or in cases of irreducible rupture in which the obstruction is seated without the neck of the sac. In a large majority of the cases of congenital inguinal or scrotal hernia, submitted to operation for radical cure, there is either adhesion between the contents of the sac and its inner surface, or the neck of the sac is constricted. Then, again, Dr. Kraske holds, Steele's method is uncertain with regard to its remote results. Simple adaptation of the pillars of the ring by sutures will not suffice, it is stated, to establish complete and permanent occlusion. In order to attain a radical cure, the hernial sac itself must be destroyed. In what way this can best be effected in an operation for the radical cure of congenital scrotal or inguinal hernia, will depend, in the first place, on whether the hernial sac, that is to say, the vaginal process, can or cannot be readily separated from the surrounding structures, particularly the spermatic

cord. If the neck of the sac can be isolated, then it may be ligatured. When one is dealing with an incarcerated or irreducible hernia, the sac must, of course, be laid open, and its contents reduced, before the application of the ligature. The proceeding may, if the surgeon follow the practice of Czerny, be completed by closing with sutures the external ring. It is recommended that the sac, in every instance, be opened below the ligature, washed out by a solution of carbolic acid, and then drained. Some surgeons (Czerny, Langenbeck, and others), excise a portion of the tunica vaginalis; but the removal of the whole of the hernial sac, which in congenital hernia is also the tunica vaginalis, is out of the question. In many cases of congenital inguinal or scrotal hernia, the isolation of the neck of the sac is attended with much difficulty or is quite impossible. The wall of the sac is sometimes closely adherent to the cord, and, in some other cases, the different elements of the cord—arteries, veins, vas deferens—are widely separated, and in close connection with different portions of the circumference of the sac. In such cases, according to Volkmann and Kraske, no effectual operation for radical cure can be performed without castration. The corresponding testis, in cases of congenital scrotal hernia, is usually much arrested in development, as is proved by the clinical fact that, in operations on such herniæ, in cases of strangulation, this organ is almost always found atrophied, and its extirpation in operations for radical cure would not only remove all technical difficulties, but also improve very much the prospects of a permanently good result.

The first of Volkmann's cases was one of a very large and but partially reducible congenital rupture, into the left scrotum of a patient aged forty-two. The operation for radical cure was performed on February 15th, 1881. The case could not be treated by ligature in the ordinary way, as the sac was firmly adherent to the surrounding parts, and the component vessels of the cord were spread over its surface. A ligature having been placed around the neck of the sac, the tunica vaginalis below this ligature, together with the spermatic vessels and the left testis, was then removed. Notwithstanding an attack of hypostatic pneumonia on the fourteenth day, the patient made a good recovery. When discharged, on the thirtieth day, the external ring was closed, and no protrusion of intestine could be felt on coughing or forcible straining. The subject of the second case, who was fifty-two years of age, had suffered from an irreducible congenital hernia on the left side of the scrotum. An operation for radical cure was performed at the request of the patient. The sac contained a mass of thickened omentum, which had become closely adherent to a portion of the sac wall. The testis was less than half the size of its fellow. The neck of the sac could not be separated from the cord, and the vessels forming the cord were spread out over the sac, though not so widely as in the first case. A large portion of the protruded omentum having been excised, it was decided to remove the testis, as this organ was very small, and the patient was advanced in years and had consented to such a step. The sac below the neck and the spermatic cord were then removed, and the stump of omentum fixed to the neck of the sac by sutures and a long needle, in order to prevent it from slipping into the abdominal cavity. The patient improved very much in general health and bodily vigour after the operation, and, when he was last seen, not the slightest

impulse could be made out in the left groin on coughing. In this, as in the first case, attention was paid during the operation and the after-treatment to the precautions of the antiseptic method.

But very few instances have been recorded of operation for the radical cure of congenital inguinal hernia, complicated by incomplete descent of the testis. In a case treated by Rizzoli in 1855, after the sac had been laid open, the rings were both dilated, and the testis, which had remained near the front of the outer ring, was replaced into the abdominal cavity. In two other cases, the testis was partly detached from the surrounding structures, and placed within the scrotum. Such proceedings, it is pointed out, would be useless with regard to the cure of the hernia, if the sac could not be isolated. In a case of congenital hernia, with undescended testis, in an adult, Prof. Volkmann would recommend castration, as it could not be expected that the atrophied testis, when removed from its unfavourable position, could develop into a sound organ.

In conclusion, Dr. Kraske gives the following summary of Volkmann's practice in dealing with congenital inguinal and scrotal rupture with a view to radical cure.

'1. If, in cases of congenital scrotal hernia, the neck of the sac can be isolated, a ligature may be applied around this. In addition to the deligation of the sac, which may be combined with apposition of the pillars of the ring by sutures, the surgeon should also, according to the indications of each case, wash out and drain the interior of the sac, and practise simple transverse section or partial excision of this membrane.

'2. The isolation of the hernial sac is very frequently impossible in cases of congenital scrotal rupture. Sometimes the elements of the cord are separated. When the sac cannot be isolated, the surgeon may apply a quitting suture, as recommended by Wahl, or follow Schede's practice, by plugging the ring with a stump of omentum, and subsequently disinfecting and draining the sac. These proceedings, however, can only be applied under certain circumstances. In difficult cases, one should consider the advisability of resorting to castration, an operation which may be the more readily adopted the smaller one finds the testis and the older the patient.

'3. In cases of congenital inguinal hernia, complicated with incomplete descent of the testis, the surgeon, if the sac—the vaginal process—can be isolated, may ligature the neck of this, cut across the membrane and endeavour to bring down the testis into the scrotum. If the sac cannot be isolated, then castration should be performed. When the patient is advanced in years, this latter operation may be regarded as the simplest and most certain method under any circumstances.'

W. JOHNSON SMITH.

AUDHOUI ON CLEANSING OF THE DIGESTIVE CANAL AND WASHING OUT OF THE STOMACH.

DR. AUDHOUI, in his recently published work (Paris, Delahaye et Lecrosnier, 1882), proposes to demonstrate how cleansing the stomach and washing out of the intestines are indispensable to health, and become necessary for the prevention or cure of a number of diseases. In the first chapter of his treatise, Dr. Audhoui speaks of the cleansing of the digestive canal by defæcation. He passes in review

normal defecation, evacuation, assisted by laxatives, and especially by Cape aloes. On this remedy, he records the varying opinions of experts, some of whom assert that it stimulates and induces the flux of rectal mucus and brings on hæmorrhage, whilst others maintain that it cures sanguineous congestion and hæmorrhoidal flux and irritation. The conclusion drawn from these two opinions is, however, not apparent. The author admits both of them, applying them to different conditions. What M. Audhoui very characteristically terms the toilette of the intestines is of the first importance in apoplectic, hypochondriacal, and nervous patients, and in women suffering from uterine diseases; for their health is seriously compromised by the accumulation of faecal matter in the intestine.

In the second part he studies vomiting, a less natural process of cleansing than defæcation, and often artificially induced by the medical attendant. Vomiting is indicated in what is termed 'the gastric condition'. The author quotes several examples of this gastric condition, cured by the administration of emetics, and studies it in its relations with variola and some other diseases.

The third chapter treats of the conditions which require, according to circumstances, the one or the other kind of cleansing. The author here studies indigestion and dyspepsia, and cites Professor Sée, who writes, in his treatise on dyspepsia, that it can be nought else but defective chemical operation; an opinion also agreed in by M. Audhoui, who then indicates the treatment for indigestion. When the patient revolts against liquid purges, he gives the following purgative pill: Powdered jalap, white magnesias powder, of each 86 centigrammes; volatile oil of cloves, 11 drops. This is divided into three masses, enclosed in medicated envelopes. These are taken at three intervals of a quarter of an hour each.

He then studies the stomach compounds, which he divides into three stages, those which prepare the stomach and put it in working order; those which support the stomach and steady its action; finally, those which complete the action of the gastric juice. The author places broth in the first place, and makes an interesting study of it; in the second, condiments, and natural and artificial mineral waters; in the third digestive ferments, brandy, acids, aromatics, and balsams.

In the third division of the work the author treats of washing out the stomach. He minutely describes its mechanism, and gives a very exact description of M. Colin's stomach-pump, of the stomach 'deutosiphon'. He then proceeds to the study of the double-current gastric sound invented by him. This sound is composed of a tube to conduct the water and of a stomachic siphon united together; the siphon is larger than the tube which conducts the water. The sound is introduced, the tube is fixed on a reservoir of water, and the long arm of the siphon falls into a basin at the side of the patient. The tap of the reservoir is opened; the patient by a slight effort—the reflex action of coughing—charges the siphon, and the current is established. It is indispensable that the pressure should be powerful, on account of the smallness of the calibre of the small tube. The action of the sound is regulated in such a manner, that more water leaves the siphon than reaches it by the tube. In this way the stomach is not congested.

Dr. Audhoui afterwards studies the circumstances which indicate the necessity for washing out of the stomach; poisoning, alcoholic

gastritis, the dyspepsia of pregnancy, accumulation of decomposed matters in the stomach, dilatation of the stomach, in reference to which he quotes two well recorded cases of Dr. Balzer and M. L. Dericq. Finally, he studies the regimen suitable to cleansing the stomach by washing out, and gives the preference to animal food.

KUPFFER ON DIPHTHERIA IN BESSARABIA.

DR. JULIUS KUPFFER (*St. Petersb. Med. Woch.*, 1882, Nos. 19 and 20), believes that, during the five years' epidemic in Bessarabia of 1874-1899, he observed some characteristic peculiarities which have not been hitherto remarked. The portion of Bessarabia under his medical supervision was that known as the Russian Bukowina, being the north-westerly stretch of the Chotin district, close to the Austrian Bukowina, a hilly country covered with beech forests, whence the name. The valleys are extremely damp, without being exactly marshy; and in them the water collects into numerous natural lakes and ponds, which dry up in summer. The very thick, but fruitful black layer of mud rests upon hard red loam, into which only a stout pick could penetrate. It does not allow the meteoric deposits to go through; they stagnate, and the ground becomes very soft during rain, only to become of stony hardness in the drought. It is no wonder, therefore, that malaria is at home here, without being exactly malignant, since, during nine years' practice in that district, he has only had two cases of death from it. Owing to an excellent water-supply and constant winds, the general hygienic condition of the people leaves nothing to be desired, only one epidemic of scarlatina having occurred in 1871-72; and this was imported by a family of Germans. It was very virulent, eight out of sixteen patients dying; but further than this it did not extend.

The population lives in villages of separate cottages, which are kept scrupulously clean, and make a very favourable impression on the visitor. They are cleaned twice every year, whitewashed inside and outside, and the floor renovated. Troops of dogs devour all the refuse in the neighbourhood, nobody ever removing a dead animal, since the dogs dispose of it in a few minutes. All cooking is done in the open, the fuel being dried dung and rubbish made into bricks. The people themselves are well-dressed, lively, and, though they never bathe, are not dirty in their bodies nor drunkards.

Dr. Ordtmann's work, *Our Daily Bread* (Leipzig, 1880), would hardly have been published had he been acquainted with the habits of the Bessarabians; since bread, good, bad, or indifferent, does not exist there. The people live altogether on fresh, unleavened maize cake (the golden Manneligga). Yet diphtheria has cruelly visited them.

Having exhausted itself in the Austrian Bukowina and its capital Czernowitz, diphtheria in 1874 made its way to the frontier, and attacked the little town of Novoselitz, 20 versts (about 13½ miles) from the author's residence, this being its first appearance on Russian soil. From here its progress was peculiar, not like a wave, but rather like the moves of a knight on the chess-board, until it had covered the whole district most rapidly, sometimes returning to a spot already visited, and devastating it several times. Whoever escaped the first visit, was sure to fall a victim to the second or third. Soon there

were no more children left, and the cases were numbered by hundreds and thousands.

The author always succeeded in proving the importation of infection when a new district was seized; and in a village it was not so much the next cottage, as that in which there lived friends or relations, which was attacked. From this he believes the poison to be not so much a volatile one, as a specifically heavy body, which settles on fluids or solids, to be transported by them.

He has also the impression that direct contact with the patient, or with articles polluted by him, is necessary to procure infection. He does not agree with those who ascribe a miasmatic as well as a contagious character to the disease, for which they point to the frequent latency of the poison in one particular place. The great vitality, and capability of infecting by the smallest dose, make such a latency appear insignificant, for seeds of highly organised plants retain their germinating powers, often for many years. When the plague had already existed for some time, measures were adopted to prevent its spread, which, however, with the indolence of the population, had not much effect; and the police, being good-natured, did not insist on their exact fulfilment. The author relates amusing things about the police, amongst others the following. An order had been given to prevent women with infants from passing the guards on the high road from one village to another. As the cattle-plague existed at the same time, an order had been given to stop cattle passing to and fro; and so it came about that, whenever the author asked the guard what their duty was, they answered, 'that they were to stop *all married women and oxen*.' Another time he was shown a child belonging to quite a different family, by a policeman whose duty it was to attend him on his inspections, well knowing that it did not belong there. When persons, especially children, were isolated, diphtheria at once vanished from that village, owing to the people concealing their sick, or not acknowledging them.

Kupffer's first encounter with this disease was truly an awe-inspiring one. Being already prepared by reports of its dire progress, he was called out one rainy December night—the darkness being intense in these black-soiled countries—to the village Kalinka, 26 versts distant. He reached it after midnight, finding scattered lights in the village, which he knew only too well. They were consecrated lights which are placed in the hands of the dying, or put at the heads of the dead. He was brought into a cottage, and found the daughter of a rich peasant, aged 17, in the following condition. Her face was pale, slightly icteric; the eyes sunken in their sockets; the mouth half opened, a fœtid odour proceeding from it; the submaxillary region slightly swollen; pulse very quick, scarcely perceptible; skin not very hot; she was apathetic. She had been only three days ill, so he endeavoured to get a view of the pharynx by making the patient sit up. This she accomplished with difficulty; but, after looking at him with a terrified look in her large eyes, she fell back suddenly dead. This, however, was the worst, but also the very rarest form with which he had to deal. Gradually the epidemic encroached upon his own immediate district; but by this time something more was known about the enemy, and Kupffer found that attentive treatment, supported by intelligent nursing, always led to a favourable issue. It is certainly worthy of note that, of ninety-six cases which he had under his care, only two succumbed;

one being that of a very obstreperous boy, who could not be got to submit to medical treatment; and of the other, it is doubtful whether it ought to be counted, as the child, three years old, died, after he had passed through diphtheria, of acute stenosis of the glottis, with croup and slight fever, and perfectly intact pharynx. There is therefore no reason for believing this to have been more than ordinary croup.

If good results are thus shown to follow a peculiar method of treatment, whilst of those cases otherwise treated more than the half died, the treatment is surely worthy of trial. The author, to a certain extent, trained the families he was attending to know the symptoms of diphtheria; and their children were betimes taught to show their throats for inspection long before the illness came on, and to allow treatment. This was quite possible, even with children of 1½ years. In the clinical course of the disease, the author observed some departures from the general run. He corroborates the testimony of other authors, and his own observation made three years ago, that a slight catarrh precedes the more virulent disease, making a fertile soil for the reception of the poison. A person with a healthy pharynx can expose himself to infection with impunity, whilst the slightest abrasion helps to take in the virus, even cauterisation or irritation of the mucous membrane with nitrate of silver being sufficient for the purpose.

There can be no question of an incubative period, as he has frequently observed that, when children returned from school to their healthy homes with diphtheria, their brothers and sisters had diphtheritic membranes the very next day, if pre-existing catarrh had predisposed them to it. There seem to be no symptoms of the early stage of the affection, beyond a stinging pain during deglutition in the part covered with false membrane. Other symptoms, *e.g.*, general malaise and the fever, belong to the catarrhal affection, and differ in nothing from an ordinary angina. They keep pace, not with the diphtheritic phenomena, but with the catarrhal affection. The fever undergoes marked exacerbation in the evening. On the morning of the third or fourth day the temperature is normal, and on the evening of the same day the last feverish excitement shows itself. In the next few days the patient seems well, except for a little difficulty of swallowing, and his people believe that he has quite recovered; but this is only the end of the acute catarrhal attack, whilst the local diphtheritic signs grow in intensity, until three or four days afterwards fever appears again, this time with a typhoid character. Unconsciousness, anorexia, and great prostration set in; the tonsils and cervical glands are enlarged; saliva flows from the mouth, which is half open; the patient's face is stupid-looking and puffy. The diphtheritic phenomena rapidly progress; the membranes are sometimes as thick as the little finger; the soft palate is paralysed; the fever soon becomes adynamic, and paralysis of the heart usually ends the scene. The accounts of superacute diphtheria are erroneous; the premonitory catarrh must have been overlooked, and very rarely is the nose attacked except late in the disease; still more rarely does it attack the larynx. The author has seen primary diphtheria only once in the nose, and never in the larynx. Albumen in the urine is the exception; even in fatal cases it was not always present. The loosened membranes do not in the first (local) instance leave loss of substance after their falling off, and not always even in the second (constitu-

tional) stage. Where then is the differential sign between croup and diphtheria? Such was the course of cases in Bessarabia, as the author saw them in thousands, undisturbed by prescriptions, and in half the cases ending in death. Those who escaped were only spared until the next time, until at last no material for the disease was left.

As a contrast to this, the normal run of the disease may be described. The malignant form is characterised by rapid sloughing of the tonsils and neighbouring organs with fever (40° Cent. = 104 Fahr.) from the very outset. The tonsils swell until they touch each other, are œdematous, reddish at first, but soon becoming blue, livid, discoloured, dirty grey, brawny, with their margins obliterated and running into healthy tissues, insensible to touch, with great fœtor in the mouth, and thin, irritating flow of saliva. A formation of membranes does not seem to take place at all, but the diphtheritic products seem to penetrate the tissues immediately, whilst normal membranes are formed on the surface, from below upwards, and grow into the pharynx. This gangrenous diphtheritic process ends in a few days in death. The catarrhal fever passes without interruption into a septic one. Between this and the previous form there are innumerable degrees of intensity; the quality of the local disease seeming, however, to be gauged beforehand by the intensity of the original catarrh. As long as the mucous membrane is able to withstand the contagion, the formation of membranes goes on, and is the expression of its power of resistance; but if the tonsils and mucous membrane become œdematous or swollen, this shows that the resistance has broken down, and the virus soon sinks into the deeper tissues. The same occurs if the mucous membrane be too long wrongly treated, instead of being supported. It thus at last relaxes, and the poison spreads, producing intoxication and destruction of the tissues. Intoxication may, however, ensue, even if only a superficial membrane have formed. This was seen by Kupffer in three cases.

The entrance-gate for constitutional intoxication seems to be the part of mucous membrane covered by a false membrane; only between this and the coverings does the poison seem to increase, for the moment that the membrane is removed, the danger of intoxication is gone; or if it have already existed, it is not increased, but gradually dies out, if a deadly quantity of the poison have not been already absorbed.

These observations lead the author to the belief that the poison does not reproduce itself in the blood, as in other analogous infectious diseases; but that it only acts quantitatively, like the inorganic chemical poisons. This belief is further supported by the fact that diphtheria does not require a virgin soil to develop its activity, like scarlatina, small-pox, etc.; but that it attacks one and the same individual at short intervals, as the author has himself experienced, having undergone three attacks, the last being the most severe.

Three cases speak in favour of diphtheria of the pharynx not being a symptom. A peasant in the village of Tscherljany had a wound of the foot, and his children died of diphtheria; soon afterwards, the wound was attacked by diphtheria, and when Kupffer saw the man, a part of the soft tissues of the foot was already destroyed. There was partial gangrene, with great swelling of the foot and leg, whilst the pharynx was perfectly intact. Coma and death occurred the day following.

The wife of the forest-keeper in Shilovzy required a blister. Diphtheria had been repeatedly in the house, the last case having occurred half a year ago. The blistered spot took diphtheria, and her husband, who had an incised wound of the left thumb, got it there as well. In both cases fever appeared, yet the fauces remained perfectly healthy, and both recovered.

Notwithstanding the great similarity between scarlatinal diphtheria and genuine epidemic diphtheria, Kupffer does not think it advisable to consider them as similar. The former must be a different disease; for it is intimately connected with scarlatina. There never are cases of such diphtheria, in which scarlatina does not manifest itself sooner or later during an epidemic, nor does an independent diphtheritic epidemic remain after an epidemic of scarlatinal diphtheria. True diphtheria has no relation to scarlatina already passed through. Kupffer believes it would be better to call the disease *diphtherioid scarlatina*, as it is very different from true diphtheria.

The author adopted a line of treatment in accordance with his views already stated, namely, that diphtheria, like splenic fever, begins locally, the later intoxication proceeding from the affected part, and that the poisonous elements do not reproduce themselves in the blood, but act on the organism in proportion to their extent. He therefore never expected other than symptomatic results from constitutional treatment, and never neglected such when it seemed advisable to adopt it; but the principal point of attack always was the local affection of the pharynx, where, with few exceptions, the disease first appeared. Early mastering of these appearances protects the nose and throat, and does not allow intoxication; therefore, the earlier the interference, the better the results will be. This can only be insured by unflagging attention, on the occurrence of the slightest indisposition during an epidemic of diphtheria, to the condition of the pharynx.

Oertel was the first to endeavour to loosen the membranes from behind forward, by creating suppurative inflammation of the subjacent tissues, chemical and mechanical means alike having failed. Guttman then followed in the same train, recommending pilocarpine as loosening the membranes by increased secretion from behind. Theoretically, Kupffer was able to infer that contraction of the subjacent tissue ought, by causing such a superficial dimensional change as was incompatible with its cohesion, to release the membrane from its position, as the placenta is peeled off the uterine parietes by the contractions of the latter; the idea was indeed contained in the use and sanction of emetics. He endeavoured, by continued slight tickling of the fauces, to promote hourly contractions of the constrictors, and had the good fortune to find the attempt successful. Further observations, that thin elastic membranes were much harder to release than large thick ones, corroborated the correctness of the proceeding, the former being capable of more easily accommodating themselves to the movements. But it is not in this alone that retching acts beneficially; for by it the whole pharynx is pressed out like a wet sponge, the fluid of the œdema escaping in the direction of least pressure, *i.e.*, outwards, and with it the poisonous elements in the tissues. Hence intoxication is forestalled, or at least rendered difficult. Swelling is visibly reduced, the vessels are freed from the external pressure, circulation, and therefore nutrition, are made normal, and the active resistance of the tissues is strengthened. In short,

the catarrh also is energetically fought in this way, and therefore both indications are fulfilled. Results may be seen in twenty-four hours; more often in less time. The membranes appear white, become loosened, are mostly swallowed without injury, and the patient is, *cæteris paribus*, well; but it is still advisable to tickle for a few days longer, as relapses often follow with alarming rapidity.

A quill-pen or laryngeal brush, dipped for precaution's sake in glycerine of carbolic acid (one per cent.) was generally the implement used. A gargle was used in the interim, consisting of 2 drachms of chlorate of potash, and one scruple of salicylic acid in a pint of boiling water, cooled down; and immediately after rinsing the mouth, a teaspoonful to a tablespoonful of the same mixture was allowed to be swallowed, in order to wash the lower parts of the pharynx. A combination of this method with pilocarpine would be justifiable, if the strength of the patient admitted it, and the membranes were very tough; but Kupffer has such confidence in his method, that he has never been obliged to use any other, except in the case of a child who had narrowing of the glottis and croup, but who recovered. False compassion should not allow the retching to be discontinued at night. Children bear the short disturbances well, and fall asleep immediately afterwards. The brush and quills were always burnt after use. Two or more patients should on no account be treated with the same brush. As injuries very easily take place during a child's struggles, and these only give a new hold to the poison, forcible treatment should be avoided. The children, as before said, should be trained betimes, which is possible even in infants of 1½ years.

Burning of sulphur Kupffer regards as about the only disinfectant worth using. Great quantities of it are, however, required. It is astonishing how easily the public are beguiled into imaginary safety by having used some popular disinfectant, probably of no use whatever.

Kupffer has lately got very good results from the use of the hydrochlorate of pilocarpine, which he uses in infantile croup, his method of administering it being as follows. Two grains of hydrochlorate of pilocarpine are dissolved in six ounces of water, and of this mixture from a teaspoonful to a dessert-spoonful is given every half-hour, until copious flow of saliva takes place. When this has continued for some time, so that loosening of the membranes may be assumed, an emetic is administered. Afterwards, a slight flow of saliva is kept up to prevent fresh membranes from forming. The fear that the pilocarpine may cause a greater œdematous swelling of the mucous membrane of the glottis, has been shown to be groundless.

F. WILLIAM ELSNER.

SEXTON ON THE CAUSES OF DEAFNESS AMONG SCHOOL CHILDREN, AND ITS INFLUENCES ON EDUCATION.

IN an essay of considerable length published as a circular of information of the *Bureau of Education* at Washington (No. 5, 1881), Dr. S. Sexton gives his views on the above important subject, and also makes some remarks on the instruction of pupils with impaired hearing, and on aural hygiene in schools. After a popular outline of the anatomy and physiology of the ear, the author considers the causes of deafness among school children. These,

he remarks, are so numerous that it is unusual to meet with a child that has not experienced some ear disease. The causes are divided by the author into 1, local causes, and 2, affections of the ear from nervous sympathy. Under the latter heading, he includes colds in the head and dental irritation. The entrance of water into the ears (from bathing, use of the nasal douche, etc.) and other causes, such as the exanthemata, diphtheria, mumps, and close cutting of the hair, are alluded to. The author rightly recommends that the pupils of the public schools (also private ones—*Rep.*) should be examined at the beginning of each session, with a view to ascertaining what number are too deaf to receive instruction in the ordinary manner, and what number having slight defects would get on better if seated properly in the school-room. In examining the hearing, the best test, the author considers, is the voice of the person with which the children are familiar in learning. The test-sentences should be intelligible to the pupils' understanding, and some of the words ought to contain the hissing and others the guttural sounds. They should also be frequently varied. During the examination, the pupil is to be placed about twelve feet from the examiner, with eyes closed, and one ear stopped by an assistant. The author gives tables, showing the results of the examination of 570 pupils. From these, it appears that, although the teachers were only aware of one case of deafness amongst this number, and the pupils themselves of 19, the author detected 76 cases, or about 13 per cent., of greatly diminished hearing in one or both ears. Of the entire number of pupils, 487 were questioned as to previous ear-ache, of whom 173 recollected having had this symptom. The author's examinations were, he remarks, by no means searching, as the teachers generally put the test-questions with the intent of compelling the children to hear them.

The suggestions given with regard to the management of pupils with impaired hearing are simple. Any pupil who is found to hear the ordinary voice of the teacher with difficulty should occupy a seat near him. Children whose hearing is good in one ear only should be seated rather to one side, with the good ear towards the teacher. Pupils who cannot understand the teacher at five feet are, the author considers, not only an obstruction to the work of teaching other pupils, but they can learn but little themselves. They should, therefore, be separated from their better-hearing fellows, and receive special instruction; of course, only for a time, if their hearing improve sufficiently under treatment. When children are so deaf that it is unmistakably manifest that they cannot be instructed by vocal methods, they may be relegated to a department where deaf mutes alone are taught. In the instruction of the very deaf, and of those who hear not external sounds, but yet hear their own voices, some assistance may be obtained by the employment of conversation-tubes amongst the former, and of the mouth-trumpet and otacoustic fan among the latter.

The author alludes to the importance of good hearing for teachers, and is of opinion that, in the appointment of teachers in the public schools, the ability to hear well should be a requisite; also that persons desirous of acquiring a pedagogical education at the public expense should be subjected to an aural examination before they are accepted.

The author devotes considerable space to a consideration of the effect of dental irritation on the ears, and to its prevention. He refers especially to aural

irritation due to eruption or caries of the temporary teeth, to caries of the first molar teeth, and to cutting of the wisdom teeth. So common, he finds, is the evil effect of the teeth on the ears, that, among the large number of school children attending the aural clinics at the New York Eye and Ear Infirmary, it is rare to find one where dental irritation should not be considered a causative factor. Amongst eighty school children, nearly all of German parentage, whose teeth the author examined, scarcely any were found free from dental irritation, and few had teeth in a normal condition. As the author well remarks, 'the surroundings of these (deaf) children are in every way discouraging; they are disheartened both at home and at school, subjected as they are to the jeers, ridicule and mockery of their companions, and to the punishment of parents and teachers for seeming inattention and dullness. Their inability to hear much of what is said to them, the difficulty they experience in the correct enunciation of words when the vocal organs are deficient, and the dismay occasioned by autophonus hearing and noises in the head, either singly or combined, are sufficient to entirely discourage these sufferers. That they become distrustful, deceitful, and vicious in character is to be expected.'

The author's concluding remark is of practical value. 'When no apparent cause for a child's dullness of action is known to exist, let there be made a thorough investigation into the condition of the acoustic organs before necessarily regarding it as a dunce or feeble-minded.'

E. CRESSWELL BABER, M.B.

KNOTT AND SMITH ON DERANGEMENT OF THE KNEE-JOINT.*

AFTER quoting some of Mr. Hey's remarks upon this accident, Mr. Knott describes the anatomical construction and the nature of the movements of the knee-joint. He quotes the Brothers Weber upon the rotatory movements of the joint, and he refers to the observations of Tillaux, which show that 'in flexion of the knee there is at first rotation around an anterior axis; towards the middle of the movement, a combination of rotation and sliding, which is in turn replaced by a purely rotatory movement towards the end of the act of flexion. The axis, around which the movements of flexion and extension take place, passes through the femoral condyles at the level of the attachment of the lateral ligaments of the joint.' Mr. Knott considers that 'a careful examination of the various observations of internal derangement of the knee-joint that have been placed on record, will show that writers on the subject have included, under the same denomination, two distinct varieties of surgical lesion—one in which the displacement affected the semilunar cartilages only, the other, in which, besides the derangement of the cartilages, there is also a change in the normal relations of the femur and tibia, or, in other words, an incomplete dislocation of the leg.'

Mr. Knott refers to Bonnet's experiments on the dead body. The leg was flexed to a right angle with the thigh and suddenly rotated, the foot being turned

outwards. The leg remained in the rotated position, and could not be completely extended. 'At the antero-internal aspect of the knee-joint, a prominence could be felt, corresponding to the internal tuberosity of the tibia.' The alteration was accompanied by a snapping sensation. This was found to be caused by 'the passage of the inner condyle of the femur behind the semilunar cartilage, which was accordingly pushed forward on the internal glenoid cavity of the tibia, but without any laceration of the internal lateral or capsular ligaments of the joint. On the outer side, the condyle had undergone no considerable displacement. It was carried a little forwards from its normal position, but still lay in the glenoid cavity formed by the external semi-lunar cartilage. On extension of the limb, with a little effort, this peculiar luxation was at once reduced. The experiment was frequently repeated with a similar result.' Mr. Knott believes that these accidents are 'incomplete rotatory dislocations of the leg itself', and he has himself suffered repeatedly from their occurrence. He considers that luxation of the cartilage 'without the application of extreme violence, or the coexistence of extensive laceration of the other fibrous structures which enter into the formation of the joint' ... 'as a physical impossibility'. Verneuil stated that most of these cases occurred in rheumatic subjects, and were due to changes produced by that disease. Panas (*Dict. de Méd. et de Chir. Prat.*) believed that the symptoms were due to loose cartilages, or to arthritis deformans, corroborating, as Mr. Knott says, the hypothesis enunciated by Velpeau and Malgaigne.

The author of this paper next records the cases described by Lannelongue and Le Fort, both of which cases favour Hey's view, and are antagonistic to Mr. Knott's opinion. 'The case of Le Fort,' he writes, 'possesses a special interest, as it occurred in his own person.' When the first accident occurred, 'the eminent surgeon occupied a position similar to that which the author of *Gulliver's Travels* leads us to infer was assumed by his hero when hidden between two leaves of Brobdingnagian sorrel. On this occasion, the Professor, while resting on his feet, with both hip and knee-joints strongly flexed, suddenly experienced a distinct sensation of displacement in the outer part of the right knee-joint. When he raised himself from this posture, the knee remained flexed, but a powerful muscular effort restored it to the extended position. This effort was accompanied by acute pain and a loud crackling sensation, as if some displaced object had suddenly returned to its place. All pain instantly disappeared, and freedom of movement was completely restored. The lesion subsequently appeared on almost every occasion that the knee was forcibly flexed, so that this movement had to be studiously avoided.'

Mr. Knott ends his paper by describing his personal experience of an injury to the knee-joint. It occurred first when he was a boy, from striking the inner side of the point of his shoe against some elevation in the ground. After falling to the ground, he found the joint was slightly flexed, the leg slightly rotated outwards, and all power of voluntary movement of the limb below the knee entirely lost. 'I applied my hands,' he writes, 'to each side of the knee, and instinctively made as powerful pressure as I could, with the hope of diminishing the pain. The continuance of the pressure caused the flexion of the joint to diminish, when suddenly I felt an exacerbation of the pain, followed by a loudly audible

* Hey's *Internal Derangement of the Knee-Joint*. By J. F. Knott, L.K. and Q.C.P.I., Senior Demonstrator of Anatomy, Royal College of Surgeons of Dublin. (Paper read before the University Biological Association, Dublin, May 1882.)—*Displacement of the Semilunar Fibro-Cartilages of the Knee-Joint*. By E. Noble Smith, Surgeon to the Orthopaedic Department of the Farringdon Dispensary. (*Med. Press and Circular*, April 26, 1882.)

clicking sensation, conveyed both to hand and ear. This sound was followed by instantaneous and complete relief. No sequelæ followed, but the lesion frequently reappeared from similar causes, and always yielded to the same treatment.

Mr. Knott is doubtless correct in his view, that his accident consisted in 'a combined twisting and lateral movement, conveyed to the knee at a moment when the ligaments are as lax as possible, the margin of the condyle being jerked over the edge of the internal semi-lunar fibro-cartilage. But I doubt the view that such a case is typical of 'Hey's internal derangement of the knee-joint'. The cases recorded by Lannelongue and Le Fort, and cited above, seem to have been distinct cases of displacement of one of the semilunar fibro-cartilages; and the cases recorded by us are also probably instances of similar injuries. Mr. Knott believes that the form of displacement from which he himself suffers is the only form 'which can occur from slight or indirect violence in the otherwise anatomically normal knee-joint. The lesions which occur,' he writes, 'in pathological conditions I have not examined, as I do not think they should be included in this inquiry.' My experience of these cases, as recorded in the paper published in the *Med. Press and Circular*, is in accordance with the opinion expressed by Mr. Hey in his original observations; for in all the cases which I have observed the symptoms appeared to indicate a displacement of one of the cartilages forward. I consider that in all these cases an unnatural laxity or weakness of the ligaments of the joint predisposed to the accident.

Mr. Knott's paper is a valuable contribution to the literature of this subject, and should be read by every medical man who practices surgery.

E. NOBLE SMITH.

CABELL ON SANITARY CONDITIONS IN RELATION TO THE TREATMENT OF SURGICAL OPERATIONS AND INJURIES.

A PAPER on this subject was read by Dr. J. L. Cabell at the recent meeting of the American Surgical Association (*Boston Med. and Surg. Jour.*, No. 24, 1882). The following propositions were submitted for consideration.

1. Statistics show that, while the mortality after certain operations, heretofore regarded as exceedingly dangerous, especially those involving abdominal section, has been greatly reduced, the death-rate of amputations and excision of joints has not diminished in an equal ratio. The progressive diminution of the mortality in the former class of operations, notably the operation of ovariectomy, is doubtless due, in some measure, to improved methods of operative procedure, which it is probable have now reached final perfection, but in a yet larger measure is attributable to more careful and systematic attention to sanitary conditions, including the employment of antiseptic precautions during and after the operation.

2. The continued high rate of mortality after amputations in city hospitals, whence the most trustworthy statistics have been derived, stands in singular contrast with a decided decrease of the general mortality of many of the same cities, and seems to show that 'the sanitary improvement of hospitals has not kept pace with that of the towns in which they

are situated'. But there is an obvious source of fallacy in drawing so sweeping a conclusion from the death-rate of operations in hospitals. The influences which affect the results of operations are so numerous and varied that it would be illogical to select any one of them and attribute the results to its agency, on the arbitrary assumption that, if we compare a sufficiently large number of cases, all other influences neutralise each other. Freedom from septic diseases would be a much better test of the sanitary condition of a hospital than that derived from its mortality returns.

3. Why, then, has not the mortality after amputations been reduced in a somewhat correspondent ratio with the marvellous diminution of the death-rate of ovariectomy? Is a death-rate of 22 per cent. for all amputations above the wrist and ankle the best that can be hoped for under the most favourable circumstances? Or is this high mortality only incidental to hospitals, and a necessary result of unhealthy influences inseparable from the aggregation of numbers of sick or wounded patients? It is not easy to find a satisfactory solution of this problem by referring to the somewhat equivocal and uncertain test of mortuary statistics. The various influences which favour or oppose the healthy repair of wounds should be separately considered.

4. The prime factor in the repair of wounds being healthy blood, the utmost attention should be paid to the due performance of all the functions connected with the blood-forming and blood-purifying processes.

5. The results of operations are influenced by peculiarities of each patient's constitution, mental and physical, and by the hygienic conditions existing before, during, and after the operation.

6. Shock, one of the most common causes of death after primary amputations for injury, owes its malignant potency in such cases to the fact that the system has not fully recovered from the previous shock of the injury. The desideratum is to prolong the duration of the primary or apyretic period, so as to secure a complete subsidence of the original shock before operating. It is probable that this may be effected by carbolicising the injured tissues according to the method of Stephen Smith, which appears to prevent inflammation, and thus to retard, or even abolish, the 'intermediary' period of wounds.

7. Septic complications have heretofore been the most fruitful causes of mortality after operations in hospitals, where their malignant effects are observed after secondary as well as after primary amputations.

8. Much may be done to prevent the development of septic poison by careful and untiring attention to sanitary precautions, including all the details of personal and hospital hygiene.

9. The statistics of amputations in private practice and in cottage hospitals, in rural districts, when compared with those of city hospitals of the usual capacity, due allowance being made for various other influences that determine the results of operations, do not warrant the sweeping conclusion that large hospitals, even those constructed on the block system, with several stories, are necessarily liable to outbreaks of septic diseases, or that the mortality must necessarily be greater than in private practice, in the same localities, and among the same classes of the population. The observed sanitary defects of any given hospital will almost certainly be found to be due to faulty location, faulty plan of construction, or to remediable defects of administration. Septic diseases are indeed

likely to arise in a ward, whether of a large or small hospital, in which a number of surgical cases with open wounds are brought into proximity with each other; but if overcrowding be prevented, it is possible to prevent the spread of these diseases by adequate ventilation and perfect cleanliness in its most comprehensive surgical sense.

10. After securing all that can be accomplished by patient and scrupulous attention to sanitary arrangements, with a view to render the atmosphere of a hospital comparatively aseptic, there it good reason to believe that an additional protection of great value may be derived from the use of antiseptic precautions practised in conformity with the Listerian principle.

11. 'Listerism,' practised *de rigueur*, while not so essential in cases of amputation, where it may often be superseded by drainage and perfect cleanliness, has achieved results in operations on joints and in treatment of 'abscesses by congestion,' which have not been paralleled by any other system of treatment.

12. The preponderance of evidence is in favor of its utility in ovariectomy and abdominal sections generally, although marvelously good results have been obtained without special antiseptics by a careful attention to other sanitary arrangements.

ROSSBACH ON BACTERIA IN THE BLOOD OF LIVING ANIMALS.

PROFESSOR M. J. ROSSBACH (*Centralbl. für die Med. Wiss.*, 1882, No. 5) records some remarkable observations upon the increase of bacteria in the blood of living animals after the intravenous injection of a chemical ferment, itself perfectly free from any organism. In the course of certain experiments to determine the various physiological actions of papayotin, he arrived at some results which would appear destined to throw considerable light upon the infective processes, and upon the multiplication of the lowest organisms in the bodies of the higher animals.

Having made injections of this substance into the blood-stream of a rabbit (partly through the jugular vein and partly through the veins of the foot), he discovered, after the death of the animal, which took place in from one to two hours, an immense number of micrococci in the blood removed directly from the heart. To make the observation more exact, he then examined a few drops of blood taken from the healthy bodies of several rabbits, and established the complete absence of any of the lowest forms of moving organisms. Immediately afterwards small quantities of papayotin (0.05 to 0.1 gramme), in a freshly prepared solution, were injected into a vein. Death was induced before very long, and invariably by paralysis of the heart, the respiratory movements lasting for a long time after the cessation of the cardiac pulsations. Blood was immediately taken from the heart and examined, and in every case, without exception, an immense number of round and oval bacteria were discovered, showing very lively movement, even in the cases where death had ensued within fifty minutes from the time of the injection. The bacteria were subsequently found to take a deep staining by means of aniline dye, and no doubt could be entertained as to their real nature.

It is an accepted fact that these lowly organisms may be present in the blood and the tissues generally of healthy living animals; but the healthy bodies appear to be the most unfavourable habita-

tion for them, since they are only to be found in very small number, and often only after elaborate preparation. In a specimen of blood taken from the vessels of a healthy animal, it would be exceedingly difficult to detect bacteria with certainty; and hence, when in the course of certain diseases they are discovered in the blood in large numbers, it is assumed that they have made their way into the body from without, and that they possess especially powerful vitality, and an extraordinary poisonous action upon the affected organism, which thus leads to a whole train of symptoms, or even to the death of the individual, from the enormous increase of the continually developing bacteria. Here, however, for the first time appears an indisputable case where a chemical ferment, itself inorganic, free from foreign organisms, and of vegetable extraction, has, by its presence in the blood of a living healthy animal, so altered the properties of the fluids of the body, that the bacteria normally present within it have suddenly become endowed with vitality and with reproductive powers, enabling them within an incredibly short time to swarm in countless profusion.

In this case also, be it noted, the absence of the possibility of any outside infection could be made certain, and hence the astonishing development of bacteria could be attributed alone to the action of the chemical poison—a development in itself far more rapid than would ensue upon ordinary infection. This fact gives material support to the view that in true infection, besides the organic germ inoculated, the chemical poison or ferment which may accompany or form a part of it plays a not unimportant part in the subsequent processes. Further experiments must settle this debated question; but it may be recorded here that Dr. Rosenberger, working with Dr. Rossbach, has obtained a similarly rapid development of bacteria in healthy bodies, by injection of septic poisons rendered absolutely free from bacteria by boiling. E. CLIFFORD BEALE.

BULL ON CERTAIN FORMS OF BRIGHT'S DISEASE.

AN article by Dr. Edward Bull, of Christiania (*Nord. Med. Arkiv*, Band xiii, and *Med.-Chir. Rundschau*), on certain forms of Bright's disease, contains many points of interest. He dwells chiefly upon what he terms the 'swollen, smooth, and non-lardaceous kidney', under which title he includes all forms which do not belong to the category of granular atrophy or amyloid degeneration. He prefaces his remarks with some interesting statistics, which bear upon the relative frequency of Bright's disease in Norway. From the records of the Pathological Institute in Christiania, he finds the proportion of deaths from this disease to be 4.3 per cent. (79 in 1837 inspections). This proportion, of course, has no demographic interest, but it is by no means in accord with the average given by Bamberger, who found 13 per cent. to represent the proportion of deaths in the General Hospital of Vienna, from which calculation the amyloid kidney was likewise excluded.

Dr. Bull explains this discrepancy by the statement that Bamberger included in his list all the cases of renal change consequent upon acute affections or secondary to organic heart disease, emphysema, cystitis, etc. The official percentage recorded for the whole kingdom of Norway stands at from 1.5 to 2.0 per cent., which is obviously too low; but the method of classification prevents the possibility

of obtaining trustworthy results. Greater accuracy can be arrived at in the report for the capital itself, which gives 2.5 per cent. as the average, which rose to 4.1 per cent. in 1869.

More trustworthy records are those collated by Dr. Bull from the reports of the medical wards of the Imperial Hospital for the years 1867-1876, which give the proportion of 3.6 per cent., with oscillations in the respective years from 1.6 to 6.9 per cent. In his own private practice, Dr. Bull diagnosed Bright's disease, excluding scarlatinal nephritis, 78 times in 7,971 patients, between the years 1870 and 1879, which represents nearly 1 per cent.

In his classification of certain renal affections, under the head of 'swollen, smooth, and non-lardaceous kidney,' he draws no distinction between a parenchymatous and an interstitial nephritis. He believes that the changes in the epithelial and the interstitial tissues occur simultaneously, and that either set of changes may predominate over the other without giving rise to any recognisable symptomatic difference. From his point of view he regards the term nephritis diffusa as most descriptive of such cases. In all cases of secondary renal affection, he would classify the different forms according to the nature of the disease which gives rise to them. A part of his paper is devoted to the discussion of scarlatinal nephritis. He points out the necessity of distinguishing between the febrile albuminuria during the acute stages and the true nephritis scarlatinoso. In 216 cases of scarlatina in private practice, Dr. Bull diagnosed nephritis in thirty-six cases (16 per cent.) These occurred as often in very slight cases as in the more severe, the intensity of the nephritis not bearing any relation to the greater or lesser intensity of the fever. Looking to the pathogenesis of nephritis scarlatinoso, he feels but little inclined to attribute it to the elimination of a specific poison, partly because of its occurrence with mild scarlatina, and its occasional absence in the severer forms, and partly because of the frequently long interval between the fever and the renal affection, which interval, again, varies greatly in its length, which is not usually the case with the incubatory interval of specific processes. As regards the production of nephritis by chill, he speaks with reserve, pointing out the fact that in certain epidemics the renal complication is more common than in others, although he does not dispute the possibility of it.

Of his 216 cases, 110 were males and 106 females, whereas the nephritis occurred 15 times in the male and 20 times in the female cases. The numbers here cited are not strong enough to compare with Dickinson's statistics, who records 946 cases of scarlatinal dropsy in males and only 629 in females, out of a total of 1575 cases.

Dr. Bull records one case of especial interest, in which a girl of 6½ years, having fairly recovered from an attack of acute nephritis, passed two months later through an attack of scarlatina without any affection of the kidney being produced.

E. CLIFFORD BEALE, M.B.

SCHULZ ON THE THERAPEUTICAL SIGNIFICANCE OF ARSENIC IN DISEASES OF THE SKIN.

DR. SCHULTZ (*Monats. für Prakt. Derm.*, 1882) writes that for a long time arsenic has acted its part in the treatment of certain skin-diseases, more espe-

cially the malignant neoplasms, in which it is and has been used, externally and internally. It was for a long time not clear how it was that arsenic was good in carcinomatous affections of the skin, in lichen, psoriasis, and lupus; and the universally accepted idea was, that the arsenious acid used acted as a caustic. This was justified by the appearance the tissues presented after its application. This view is, however, untenable, if the actions of arsenic be analysed somewhat more thoroughly; and against it is the fact, that its internal administration is followed by good effect. The chief argument against it is, however, that only the diseased portions of the skin are acted upon by arsenical paste, whilst the healthy circumferential tissues are unaffected, a circumstance which occurs with no other known caustic. It is asserted that arsenic forms an albuminate with the albumen of the body; but why should only the diseased tissues be so sensitive to this reaction, whereas with other caustics it is immaterial what tissue comes into contact with them, *e.g.*, nitrate of silver? The action of arsenic must be otherwise explained, and we find this explanation in the peculiar chemical properties of the drug in question. Suppose a solution of an arsenical alkali, *e.g.*, Fowler's solution, to have stood for some time exposed to the air, and with it, to the contact of organic matter, it will be found that the fluid, which originally contained only arsenious acid, will now contain also acid arsenical salts of the alkalies present, that is to say, an oxidation has taken place, one atom of oxygen having combined with the arsenious acid. The oxygen of the air is never found in the atomic form of O, but in that element we always find it as $O + O = O_2$, not taking into account the slight amount of ozone = O_3 , which is not required in the present instance. We must assume then that arsenious salts are, by the addition of the oxygen of the air, converted into arsenical, if factors be present which are capable of transposing the atmospheric oxygen from the molecular into the atomic form (that is, to split up the molecules, making $O + O$, out of O_2), and this faculty is possessed by the organic constituents of the air, particularly by the spores and germs which it contains; in fact, by every living albumen, as has been abundantly proved by experiment. Furthermore, it is a well-known technical property of arsenic, and one which is made use of in dyeing, to give off part of its oxygen to reducing bodies, so that arsenious acid remains, *e.g.*, $K_3 As O_4 - O = K_3 As O_3$; arsenious tetroxide resembles in this respect (more especially its potassium salts, which we have here taken as example) the well-known chlorate of potassium ($KCl O_3$). If care be taken that in the solution (destined for dyeing) to be oxidised, a third body, in addition to arsenic, which gives off oxygen easily, is present, then the arsenious acid which arose from the arsenious tetroxide draws the oxygen of the other body to itself, again forming arsenious tetroxide which, in turn, gives off its oxygen to the colouring matter, and beginning the series over and over again, as long as the third body giving up its oxygen is capable of so doing.

From this we learn that, with comparatively small amounts of arsenic, we can obtain considerable oxidation effects if, by another suitable combination, an opportunity be given to the arsenious acid of reconverting itself into arsenious tetroxide by seizing upon an atom of oxygen; and it is with these two facts, viz., that in one condition the arsenic is easily oxidised, whilst in another it readily reduces itself, that

we have to deal if we want to get a good idea of the arsenical action in the organism. Binz has proved that living protoplasm is quite capable of carrying on these processes just described. He and the author digested different pieces of fresh tissue, with a solution of arsenious acid; and they succeeded in showing that there was arsenious tetroxide present in the dialysis of the digest, whilst *vice versa* a similar result was obtained. This occurred particularly in the experiments with glandular organs and the brain. They conclude therefrom that arsenic (considered as a metal), under fitting conditions, is capable of setting in motion a great exchange of oxygen between itself and its surroundings. In contact with the same organic material, *e.g.*, the cells of a living gland, arsenious acid is oxidised, arsenious tetroxide reduced; and this cannot be otherwise explained, than by assuming that from the cells the arsenious acid attracts oxygen to itself and forms arsenious tetroxide, whilst on the other hand this latter gives off oxygen to the same cells, and becomes converted into arsenious acid.

When in the living body the blood, containing arsenious acid, comes to the cells of the different tissues, the process just described repeats itself, and an exchange of oxygen is created in the separate cells, which is energetic to a high degree, and much more intense than under normal circumstances; so much so, that the existence of the cells is endangered, and they are found in a state of fatty degeneration in the liver in cases of arsenical poisoning, this condition being equivalent to death of the part. That protoplasm, which has the most complicated processes to carry out, is preeminently susceptible to the influence of arsenical compounds, notably, therefore, the glands with their enormous physiological chemical capabilities. It has been fixed that, wherever the most activity prevails in the body, there will the most destructive alterative influence of arsenic be exerted. In this lies its great therapeutical importance in certain skin-diseases; the arsenious acid, which we apply in the form of arsenical paste to lupus, begins its action by oxidising itself at the expense of the organic material, of which abundance is present in the lupus-tubercle, which must possess an extraordinary vitality, if we are to judge by its destructive progression in healthy tissues, and thus furnishes a most suitable object to attack. The result is, destruction of elements of the lupus nodule, which necrose and break down. The skin, being protected by an inactive external layer of epidermic scales, is not at all troubled by the presence of arsenic so near it; but as it would ultimately give way if too long exposed to its influence, we remove the arsenic as soon as some effect has been produced upon the diseased part, which we have not long to wait for. This explains Kaposi's description of the singular appearance presented by persons who have been subjected to the process. The skin is punched out as if with a punching iron. Everywhere that the active protoplasm of the lupus has come into contact with the arsenic, we see it destroyed, whilst the healthy skin surrounding the innumerable holes is preserved as such.

F. W. ELSNER.

ROBERT BARNES, M.D., F.R.C.P., has been elected one of the Honorary Consulting Physicians to the Chelsea Hospital for Women, which will be removed to the new building in the Fulham Road in the early part of next year.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. SHAPTER.—The Therapeutical Uses of the *Herba Pulsatilla*. (*Practitioner*, June.)
2. YEO.—The Antiseptic Treatment of Consumption. (*Brit. Med. Jour.*, July 1882, p. 7.)
3. THOROWGOOD.—The Use of Hypophosphites in the Treatment of Phthisis Pulmonalis. (*Brit. Med. Jour.*, July 1882, p. 11.)
4. NAPIER.—The Internal Use of Chrysophanic Acid in Psoriasis. (*Lancet*, May 1882, p. 817.)
5. MILLICAN.—On Hyoscyamine. (*Lancet*, May 1882, p. 819.)
6. WALFORD.—Arsenic as a Prophylactic in Zymotic Diseases. (*Lancet*, May 1882, p. 844.)
7. MORRIS.—Papaine in the Treatment of Chronic Eczema. (*Brit. Med. Jour.*, May 1882, pp. 738, 845.)
8. HORMAZDI.—Salicylate of Soda in Tonsillitis. (*Lancet*, June 1882, p. 983.)
9. SMITH.—Codeia in the Treatment of Diabetes. (*Brit. Med. Jour.*, June 1882, p. 933.)
10. SNELL.—A peculiar Idiosyncrasy of Mercury. (*Practitioner*, June 1881.)
11. FERGUS.—Bicarbonate of Soda in the Treatment of Tonsillitis. (*Lancet*, June 1882, p. 1018.)
12. LAW.—Sodium Nitrite in the Treatment of Epilepsy. (*Practitioner*, June 1882.)
13. YEO.—Sulphurous Acid in Typhoid Fever. (*Practitioner*, June 1882.)
14. JONES.—Large Doses of Opium in Arthritis of the Knee. (*Med. Times and Gaz.*, June, p. 630.)
15. MOMMSEN.—The Action of Certain Poisons on the Irritability of Nerves. (*Virchow's Archiv*, Band lxxxiii.)
16. KOBERT.—The Influence of Various Pharmacological Substances on Muscle. (*Archiv für Exper. Pathol. und Pharm.*, Band xv.)
17. BECK.—Failure and Success in the Treatment of Traumatic Tetanus. (*Med. News*, May 13; and *New York Med. Record*.)
18. PILCHER.—Gelsmium in Pruritus. (*Annals of Anat. and Surg.*, vol. iii.)
19. SMITH.—Calcium Sulphide in Suppuration. (*New York Med. Jour.*, June.)
20. GINÉ.—The Treatment of Tonsillitis with Carbonate of Soda. (*Bull. Comm. de l'Union Pharm.*, Sept. 1881.)
21. FISCHER.—On Naphthaline. (*St. Petersburg. Med. Work.*, No. 16, 1882.)
22. SEIFFERT.—Chinoline in Diphtheria. (*Berl. Klin. Woch.*, No. 22, 1882.)
23. KÜSTNER.—The Infusion of an Alkaline Solution of Salt in the Human Being. (*Centralbl. für Gynäkol.*, 1882, No. 10.)
24. BISCHOFF.—A Successful Case of Intra-arterial Infusion of an Alkaline Salt Solution. (*St. Petersburg. Med. Work.*, No. 19, 1882.)
25. SMOLSKY.—Chian Turpentine in Cancer. (*Trans. of St. Petersburg. Med. Soc.*, 1880-81.)
26. SHOLKOVSKY.—The Action of Hot Foot-Baths. (*Vratch.*, 1882, No. 7.)
27. KOSOROTOFF.—On Treatment of Toothache. (*Vratch.*, 1882, No. 8, p. 126.)
28. ROSENBLUM.—On Collapse from Apomorphia. (*Proc. of the Kaluga Med. Soc.*, 1881.)

1. Shapter on the Therapeutic Uses of the *Herba Pulsatilla*.—In the *Practitioner*, June 1882, p. 32, there is to be found a very exhaustive paper by Dr. Lewis Shapter upon the uses of this drug, well known and much used by our American brethren, but not so well appreciated by ourselves. After entering fully into those cases where it will be

found useful, Dr. Shapter concludes that the true position of pulsatilla as a remedial agent appears to be that of acting upon and controlling irritability and over activity of the ganglionic nervous system; but it has no claim, except indirectly, as a vascular sedative, to be classed with aconite and hellebore. Upon this view, eclampsia, dependent upon an exciting cause acting reflexly, will be controlled; but true idiopathic epilepsy, or chorea, will not be allayed. In prescribing the drug, the tincture should always be employed of the strength of one to eight, and given an hour before food, in doses of ten to thirty minims, with twenty drops of compound tincture of chloroform. Pulsatilla, Dr. Shapter thinks, is a valuable adjuvant to bromide of potassium. [In the *Med. Digest*, sec. 105, 3, is a reference to Dr. Blodig's opinion, who speaks highly of its value in odontalgia, vide *Med. Times and Gaz.*, vol. i, 1861, p. 450. In neuralgia also, 1243:5, several observers advise it; vide LONDON MEDICAL RECORD, 1880, p. 444.—*Rep.*]

2. *Yeo on the Antiseptic Treatment of Consumption*.—Dr. Burney Yeo enters most fully upon this interesting subject in a clinical lecture reported in the *Brit. Med. Jour.*, July 1882, p. 7. Creasote, the remarkable effects of which were described by Dr. Inman in the *Med. Times and Gaz.*, vol. i, 1853, p. 507 (vide *Med. Digest*, sec. 698, 2), is still found specially valuable, both internally and as inhalation. Dr. Yeo describes, by means of a diagram, how to construct a respirator of perforated zinc for a few pence, and prefers creasote to all other drugs used for inhalation, twenty minims of a mixture of equal parts of creasote and spirits of chloroform being dropped on the sponge of the inhaler at a time, and renewed when exhausted. One very striking case is recorded, where marvellous improvement followed treatment in an apparently hopeless case; the internal administration of the hypophosphites with quinine and iron being combined with creasote inhalations. Dr. Yeo thus concludes: 'I know of no disease in which so many and various indications for treatment arise during the progress of phthisis. But if pulmonary phthisis be pulmonary tuberculosis, and if tuberculosis depend on the presence of an infective organism in the tissues, a rational treatment of phthisis must include the administration of antiseptic agents, or of the surrounding our patients with antiseptic conditions.'

3. *Thorowgood on the Use of Hypophosphites in the Treatment of Phthisis Pulmonalis*.—Dr. John C. Thorowgood claims, in the *Brit. Med. Jour.*, July 1882, p. 11, a very high place for the hypophosphite salts in the treatment of phthisis, giving good reasons for the value he attaches to their use. He asserts that he has never seen such good results follow the use of cod-liver oil and iron as from the use of the hypophosphites. In caseous and scrofulous pneumonia they often act like a charm, and Dr. Thorowgood would like to see a more extended use of the salts, as he has ever found them most useful, and never attended with injurious results. Those who wish to try the remedy must first see that no renal or hepatic complications exist, and then test their hypophosphites, seeing that they ignite readily if heated, and give the salt in simple water or syrup. At times a little carbonate of soda may be added with advantage.

4. *Napier on the Internal Use of Chrysophanic Acid in Psoriasis*.—Dr. Alexander Napier details, in the *Lancet*, May 1882, p. 817, some interesting experiments of the use of chrysophanic acid given

internally in cases of psoriasis. A well marked case came under Dr. Napier's notice in November, and the acid was begun in doses of one-eighth of a grain after each meal, and carefully increased to two grains for each dose. By February, the patient was perfectly well. Three-grain doses were tried, but they caused gastric disturbances. In a second case, the patient could bear only one quarter of a grain. Dr. Napier refers to several other cases, in which decided benefit accrued from the use of the acid internally, and looks forward to the time when this mode of treatment will be extensively and usefully employed. [In the LONDON MEDICAL RECORD, July 1881, p. 268, the observations of Dr. Charteris upon the constitutional action of chrysophanic acid may be referred to with interest.—*Rep.*]

5. *Millican on Hyoscyamine*.—Mr. Kenneth W. Millican, in the *Lancet*, May 1882, p. 819, describes the great benefit he has derived from 1-120th-grain doses of this alkaloid in cases of colic and other spasmodic pains. In one very severe case of hepatic colic, a dose was administered every half-hour, and relief was speedily obtained after all other remedies had failed.

6. *Walford on Arsenic as a Prophylactic in Zymotic Diseases*.—Dr. Walter G. Walford draws attention, in the *Lancet*, May 1882, p. 844, to the great value he attaches to the use of arsenic as a preventive agent in exposure to infectious diseases. Dr. Walford believes that, by the administration of the drug, in any of the diseases of this class, during the incubation period, an attack may be prevented or greatly modified.

7. *Morris on Papaine in the Treatment of Chronic Eczema*.—Mr. Malcolm Morris, in the *Brit. Med. Jour.*, May 1882, pp. 738, 845, speaks strongly in favour of the use of this agent, and cites a very severe and obstinate case, in which a complete cure was effected in a few weeks.

8. *Hormazdi on Salicylate of Soda in Tonsillitis*.—Mr. R. N. Hormazdi, in the *Lancet*, June 1882, p. 983, speaks highly of this salt in the severe cases of tonsillitis, more especially in those that are followed by rheumatic fever. In fifty-seven cases of acute tonsillitis due to exposure to cold, salicylate of soda in twenty-grain doses every four hours effected a rapid cure, and in no case did suppuration threaten.

9. *Smith on Codeia in the Treatment of Diabetes*.—In the *Brit. Med. Jour.*, June 1882, p. 933, Dr. Shingleton Smith enters very fully into the merits of this drug, and gives a very exhaustive *resumé* of the literature of the subject. Three cases are reported in detail. In all, a marked improvement followed the use of codeia, which improvement ceased when the drug was omitted, and was renewed on its repetition. Morphia had a good effect in two of the cases, but the improvement was much less marked with it than with the other alkaloids.

10. *Snell on a Peculiar Idiosyncrasy of Mercury*.—Mr. Simeon Snell, in the *Practitioner*, June 1882, p. 180, reports the case of a widow, aged 41, who was ordered drachm doses of liquor hydrargyri perchloridi, which immediately caused vomiting and a high temperature, 104 deg. When the mercury was discontinued, the temperature at once fell, and 2 grains of hydrargyrum cum creta were substituted. After one dose, the temperature rose to 101.8 deg., accompanied with vomiting and general disturbance as before.

11. *Fergus on Bicarbonate of Soda in the Treatment of Tonsillitis*.—Dr. Walter Fergus, in the *Lancet*, June 1882, p. 1,018, speaks highly of the

value of bicarbonate of soda applied locally in tonsillar inflammation. A brush well charged with the salt, by pressing it in with a spatula, is carried to the back of the pharynx, and the powder uniformly spread over the inflamed surface.

12. *Law on Sodium Nitrite in the Treatment of Epilepsy.*—Dr. W. T. Law, in the *Practitioner*, June 1882, p. 420, reports the case of a man, aged 29, with no hereditary nervous predisposition, who had his first fit when 25½ years old. The fits were chiefly nocturnal, and were preceded by giggling, drowsiness, and headache. The treatment consisted in attention to general health, absence of excitement, acting on Dr. Radcliffe's advice that 'epileptics should be rather underfed than otherwise', and medicinally in bromides, borax, belladonna, and nitrite of sodium. The latter, acting as it does on the vasomotor apparatus, like amyl nitrite and nitro-glycerine, was administered in 20-grain doses. This is the first case in which this salt has been tried, and the result was that, whilst under ordinary treatment the patient had seventy-eight fits in sixty-four weeks, under nitrite of sodium there were three fits in fourteen weeks, with great improvement in general health.

13. *Yeo on Sulphurous Acid in Typhoid Fever.*—In the *Practitioner*, June 1882, p. 424, Dr. Burney Yeo gives details of an experiment of treating typhoid fever with sulphurous acid. On the fourth day of the fever, the temperature ranged from 102 deg. to 104 deg. Sulphurous acid was given in half-drachm doses every four hours. The case ended fatally on the twenty-ninth day, and the *post mortem* examination showed death to have resulted from local peritonitis, following perforation of the ileum. The ulcers, about nine, were large and deep, a few were healing, in four the peritoneal coat was sloughy, giving way on the slightest friction. Dr. Yeo arrives at the following conclusions. That sulphurous acid in typhoid has no influence on the characteristic lesions, but, like quinine, etc., it modifies the temperature considerably. Thus, in the above case, from the ninth till the twentieth day, the highest temperature was only 102 deg.

14. *Jones on Large Doses of Opium in Arthritis of the Knee.*—Dr. Handfield Jones, in the *Med. Times and Gaz.*, June 1882, p. 630, reports two severe cases of inflammation of the knee-joint in which opium, in doses from 3 to 8 grains daily, produced a marked effect. The antiphlogistic powers of opium are no novelty; still, they are frequently overlooked.

R. NEALE, M.D.

15. *Mommsen on the Action of Certain Poisons on the Irritability of Nerves.*—The experiments (Virchow's *Archiv*, Band lxxiii) were made with the usual isolated nerve-muscle preparation of the hind leg of the frog, and the action of the poison was ascertained by applying it directly to the nerve. This method is not without objection, as the mere physical contact of the solution of the poison may injure the function of the nerve. Atropia, alcohol, chloroform, and ether were employed. The first of these was found to lower the excitability or irritability of the motor nerve, without the occurrence of an initial stage of increased excitability. The other substances behaved alike, first raising, afterwards lowering the excitability of the nerve. Mommsen's observations are of considerable pharmacological interest if his method be reliable, for they are opposed to the hitherto generally adopted view, that nerve-fibres as such are not influenced by the action of poisons.

16. *Kobert on the Influence of Various Pharmacological Substances on Muscle.*—Kobert, in a long and evidently carefully conducted investigation (*Arch. für Exper. Pathol. und Pharm.*, Band xv) in the laboratory of Schmiedeberg, has, by the help of Rosenthal's apparatus and Harnack's modification of Tiegel's apparatus, studied the action of representatives of various pharmacological groups on the activity and power of the muscle of the frog. The gastrocnemius of the living frog was the muscle observed; and, under electrical stimulation, the height of the muscle-curve, and the duration of the excitability of the muscle, and its capability to raise a given weight, were tested before and after the subcutaneous injection of the drug. The results were as follows. Copper (tartrate of soda and copper), as Harnack has already shown, in a dose of 0.2 milligrammes, considerably diminished the duration of excitability of the muscle, without affecting much the height of the muscle-curve or the power of the muscle; 0.4 milligrammes caused complete paralysis. Antimony (tartrate of soda and antimony) produced, in doses of 1 to 20 milligrammes, enfeeblement of the muscle, but never paralysis. Helleboreine, which possesses the action of digitalin, in a dose of 5 milligrammes, caused considerable paresis. Similar, but more powerful, was the action of veratria. Arsenic (arsenious acid) behaved much in the same way as antimony, so also the chloride of platinum and the perchloride of mercury. Of the salts of the alkalis, the chloride of sodium, even in large doses, had no effect, whilst the chloride of potassium and the chloride of ammonium produced a certain degree of paralysis. Cinchona caused a remarkable lowering of the excitability of the muscle; so also the oil of nutmeg. None of all these substances affected the form of the muscle-curve. Cocaine and emetine, however, which were next experimented with, produced the peculiar irregular curve, which Harnack has observed for lead. Tartrate of soda and the tartrate of tin and soda were entirely without effect on the activity of the muscle. Kreatine in a dose of several centigrammes, weakened the muscle; but in doses of from 1 to 5 milligrammes increased its excitability and power. Hypoxanthine acted similarly, although not so powerfully. As these two substances, especially the former, are important constituents of flesh-extracts, in view of recent statements of the low nutritious value of such extracts, the author's results are highly interesting. For, as he remarks, beef-tea and beef-extracts do not merely satisfy and please the palate, but are important remedies for increasing the muscular strength. Caffeine acted in the same manner, its action beginning quickly, and continuing for some time. Glycogen behaved much in the same way. A salt of iron in large doses enfeebled the muscle, but in small doses increased its power. In small and medium doses, alcohol did not affect the muscle; in large doses it weakened it. Finally, large doses of physostigmine injured the muscle, whilst smaller doses were without action.

17. *Beck on Failure and Success in the Treatment of Traumatic Tetanus.*—Dr. Charles T. Beck of New York reports a fatal case of traumatic tetanus, in which treatment by eserine was an important feature (*Med. News*, May 13, 1882; and *New York Med. Record*). The patient, a well-developed boy, aged 16, was injured in the foot by a rusty nail. The wound attracted but slight attention for a week, but at the end of this period tetanic symptoms were established. Atropia and morphia were then administered hypo-

dermically, one-thirtieth of a grain of the former with one-half grain of the latter, and were rapidly followed by chloral-hydrate and bromide of potassium. After twenty grains of the former, and half a drachm of the latter had been given, with inhalations of chloroform, all without success, eserine was resorted to as suggested by Dr. Thomas Layton (*Med. News*, March 25). At first doses of one sixty-fourth grain per hour were given, the chloroform inhalations being continued, but without visible effect. The eserine was then advanced to one forty-eighth grain every hour, and the patient appeared to improve steadily under this dose until the following morning, when all the symptoms became more pronounced. The eserine was pushed to one twenty-fourth grain every half-hour, but there was no reduction in the force or frequency of the spasms, and the patient, continuing to fail, sank and died early in the morning of the tenth day. In the *Lancet*, April 8, 1882, Mr. Millar reports a successful case treated with syrup of chloral (B. P.). The patient, aged 43, was severely lacerated in his side and shoulder by the wheels of a threshing machine. The wounds were dressed with carbolic lotion (1 to 40), and the patient's progress towards convalescence was satisfactory until the eleventh day, when sore throat and difficult deglutition were noted. Three days later his neck was found red and tender to the touch. On the morning of the eighteenth day it became clear that tetanus had set in. A hypodermic of morphia (one-sixteenth grain) relieved the severity, but not the frequency of the contractions, but a drachm of the syrup of chloral administered *per os* produced a decided amelioration in the severity of the attacks. The patient was then directed to take one drachm per hour while awake. After the third dose he slept for three hours, and the paroxysms became less regular in their appearance, and less severe. He was then ordered to take the chloral less frequently, but on the following morning being worse, the hourly doses were again prescribed; five days later he could sit up in bed. The dose of chloral was now increased to a drachm and a half, but to be taken only when specially indicated. The patient continued to improve until he was discharged cured, six weeks after the reception of the injury.

18. *Pilcher on Gelsemium in Pruritus*.—Dr. Lewis S. Pilcher, in *Annals of Anat. and Surg.*, vol. iii, p. 143, calls attention to the usefulness of gelsemium in overcoming pruritus, especially that form in which the itching and distress are out of proportion to the superficial lesion of the skin. He gives ten drops of the tincture, and repeats it every half hour until a teaspoonful is given, or until the trouble is overcome. It does not always succeed, as Dr. Bulkley has shown, but it may prove to be one of our remedies in time of need, others failing.

19. *Smith on Calcium Sulphide in Suppuration*.—Dr. A. H. Smith (*New York Med. Jour.*, June 1882), after careful analysis of several cases, claims that he is warranted in concluding that in many cases of suppuration an appreciable and often marked benefit is derived from the use of calcium sulphide. At the same time the action of the drug is not perfectly uniform, and in apparently favourable cases it may fail entirely. The drug is somewhat prone to irritate the stomach, which affords an indication for small doses frequently repeated. One-tenth of a grain every two hours will generally, in acute cases, secure the full therapeutic effect of the drug, but large doses may sometimes be required, and some patients bear well a grain three or four times a day.

Even in small does the drug may occasionally produce headache, and the patient be more or less annoyed by eructations of hydrogen sulphide.

20. *Giné on the Treatment of Tonsillitis with Carbonate of Soda*.—Professor Giné of Madrid (*Bull. Comm. de l'Union Pharm.*, Sept. 1881; *Archiv der Pharm.*, Band xx, Heft 1, 1882) speaks strongly of the successful employment of carbonate of soda in tonsillitis. It may be either blown on the tonsil through a tube, or applied by the patient's own finger. He cites cases cured in this simple manner, by dozens. Some result was obtained in every case, and, in many, a cure was obtained in twenty-four hours. The use of the remedy is hence recommended in all cases, even before the disease has fully declared itself, as many cases may be cut short by this means. Frequent application of carbonate of soda to swollen tonsils, for a short time, will also render operative measures unnecessary.

E. CLIFFORD BEALE.

21. *Fischer on Naphthaline*.—Dr. Fischer (*St. Petersb. Med. Woch.*, No. 16, 1882) has made investigations into the uses of this article in all directions. It has been in use as an antiseptic in the surgical clinic at Strasburg; and the results arrived at by Fischer are that naphthaline is a very serviceable antiseptic against both bacteria and mycetes. He even believes it to have a certain influence on inorganic ferments. Some kinds of decomposition are checked in a higher degree by naphthaline than by iodoform. Prof. Kohts observed that in the children's wards for diphtheria and scarlet fever not a single case of infection by contact occurred during the six weeks that they were strewn with naphthaline; this showing that it is also operative as a gas. It is further an active poison to all insects, *e.g.*, fleas, lice, acari, flies, midges, moths, and spiders. Against scabies it is used with equal parts of vaseline; birds and mammals bear it very well, although, when large doses were given to dogs internally, dysentery set in. Sometimes the urine is darkened by naphthaline, though never so much as by carbolic acid. It passes unchanged through the urine, but poisoning by it has never been observed, neither does it produce local irritation, although powdered directly upon wounds and ulcers. Its chief advantage is that it is fifty times cheaper than iodoform. One soon becomes used to the smell. In Nos. 8 and 9 of the *Berl. Klin. Woch.*, 1882, Fischer further gives the manufacturers' names from whom the best forms of this useful substance can be obtained, which are here enumerated, as they may prove useful. 1. For direct application to large wounds, for packing cloacæ, abscesses, etc., the best form is the naphthalinum albisimum resublimatum of Trommsdorff, chemical factory at Erfurt, price about 1.20 marks per kilogramme; 2. For lighter injuries, and for impregnating the dressings: *a.* The crystallised naphthaline of Trommsdorff, price 60 marks for 100 kilogrammes; *b.* Naphthalinum resublimatum of Ohlgardt and Co.'s chemical works at Kehl, Baden, about 50 marks for 100 kilogrammes. Besides these, very good preparations are made by Merk in Darmstadt (Hesse), Kuhlbaum in Berlin, etc.

22. *Seiffert on Chinoline in Diphtheria*.—Having seen the effect of chinoline on various febrile processes in a series of experiments carried out under Gerhard's supervision, Seiffert (*Berl. Klin. Woch.*, No. 22, 1882) determined to try the effect in diphtheria: and his results have been such that he has felt himself justified in publishing them. Chinoline is a component part of coal-tar, which Runge first ob-

tained in 1834, and which subsequently was examined by Gerhardt and Hofmann, and synthetically by Skraup (see *Pharm. Zeit.*, No. 84, 1881). The free base is insoluble in water, easily soluble in alcohol, ether, chloroform, and benzene. With tartaric acid it forms a stable salt, tartrate of chinoline, very suitable for internal administration, and impermeable to damp. Donath showed that it resembled quinine in its actions, and in 2 per cent. solutions prevented the development of bacteria in various breeding-fluids; it was, therefore, more powerful than salicylate of soda, carbolic acid, boracic acid, sulphate of copper, and alcohol. It has been used in the various branches of science as an antiseptic. In the first two cases, Seiffert painted the mouth with a watery solution of the tartrate (5 per cent.) A full account of each case is given, with the temperature-charts, which show that the local application was followed by immediate fall in the temperature and pulse, the former by about 2 deg., the latter by twenty beats. The patients complained of the unpleasant taste and smell of the drug, whilst the burning sensation it created was easily removed by gargling with cold water. Owing to the latter drawbacks, it was necessary to use pure chinoline in subsequent cases, as the tartrate was also not sufficiently soluble. After many trials, in conjunction with an apothecary, Seiffert found that a 5 per cent. solution of the pure drug, with fifty parts each of water and alcohol, remained clear, and had no unpleasant odour. With this solution, and with a gargle composed of pure chinoline, 1 part; distilled water, 500 parts; rectified spirit, 50 parts; oil of peppermint, 2 minims, all subsequent cases of diphtheria were treated. They are divided by Seiffert into severe and mild cases. The latter appear to have recovered within a period varying from three to eight days, and two, three, or four applications only being required to ensure complete recovery. The paper is to be continued, and contains very complete notes of the cases whose progress is remarkable, in spite of attacks of intercurrent endocarditis.

23. *Küstner on the Infusion of an Alkaline Solution of Salt in the Human Being.*—In No. 10 of the *Centralbl. für Gynäkol.*, 1882, a case is related in which such an operation was performed on a woman who had been ovariectomised and had lost much blood. The operation was performed by exposing the left radial artery, dividing it, and tying the central end, and then injecting into the peripheral end, by means of an irrigator, specially constructed, about 900 to 1,000 cubic centimètres of a solution of salt, containing in every 500 cubic centimètres one drop of concentrated caustic soda. The infusion lasted one hour, and contributed to raise the arterial tension so much, that a radial pulse was distinctly numerable in the other hand, while the patient was previously pulseless for nearly three hours. Heat returned to the extremities and face, but the patient died one hour and a quarter after the conclusion of the operation. *Post mortem* examination revealed extensive carcinomatous disease of the peritoneum. The author draws attention to the fact that, although life was not prolonged, yet a result similar to that obtained by English surgeons during the cholera epidemic by venous injection of water, and by Goltz, Lander, and Kronecker, as well as Schwartz, quite recently on animals, was in this case achieved, namely, a return of the pulse and of heat to the extremities.

24. *Rischoff on a Successful Case of Intra-Arterial Transfusion of an Alkaline Salt Solution.*—This

author (*St. Petersburg. Med. Woch.*, No. 19, 1882) had the good fortune to meet with a case in which, guided by the experiments of Worm-Müller, Goltz, and Schwartz (which prove that in animals with the highest degree possible of anæmia, recovery may take place by the injection of an alkaline saline solution), he was able to test the applicability of this method to human beings, the case being one of a primipara, aged 31, who had lost a large quantity of blood after the expulsion of the placenta. Death being imminent, transfusion was undertaken, and lasted one hour, during which time 1250 grammes of a six per cent. solution of sodium chloride, to which, in the absence of caustic soda, a few drops of potash were added, was allowed to percolate into the patient's left radial artery by gravity (the vessel being held as high as possible and connected with the artery by a vulcanite cannula to which a tube 60 centimètres long was attached). The pulse fell from 156 to 122 during the operation; respiration became easier, and no other bad symptoms appearing after its completion, even the oppression, which is noticed after transfusion of blood, being absent in this case. Recovery took place despite a perimetritis which had appeared during the labour. The author's conclusions are these. 1. Compared with transfusion of blood, this method is much simpler, less dangerous, takes up less time, and is more practicable when we recollect what a difficulty there usually is in obtaining a subject to supply blood; 2. The amount of solution should not be less than 500 cubic centimètres (which is Schwartz's dictum); 3. Arteries are to be used in preference to veins (according to the late Professor Hueter), as being easier found if anæmia be intense. [This, however, is only secondary to the fact that, by arterial transfusion, the blood-pressure is much more gently raised, since the capillaries and veins have to be traversed before the fluid can reach the heart, and the fluid has an uniform temperature; paralysis of the heart from sudden distension of its already weakened walls being thus beyond the range of possibility.—*Rep.*]

F. WILLIAM ELSNER.

25. *Smolsky on Chian Turpentine in Cancer.*—Dr. Smolsky reports (*Trans. of the St. Petersburg. Med. Soc.*, 1880-81, vol. i) a case of rapidly advancing cancer of the uterine cervix, in which, during ten weeks, he administered Chian turpentine, at first in daily doses of 11 grains, afterwards in those of 20 grains. No improvement whatever followed, and the patient, who bore the remedy quite well, soon died. The preparation had been received from Mr. John Clay himself. [In a similar case, reported lately by Dr. N. A. Sotchava of Charkov, Chian turpentine has utterly failed to check either the course of malignant disease or the hæmorrhage. The patient, during one month and a half, took daily four pills. After four days' use of the remedy she had sickness and diarrhoea, and her general state, accordingly, grew worse (*Proceedings of the Charkov Med. Soc.*, and *Vratch*, 1881, No. 19). No better is the experience of a few other Russian physicians, who tried the remedy, following Mr. Clay's advice.—*Rep.*]

26. *Sholkovsky on the Action of Hot Foot-Baths.*—Dr. Sholkovsky (*Vratch*, 1882, No. 7) undertook a series of experiments, in order to elucidate the influence of an ordinary hot water foot-bath on temperature and circulation in all remote parts of the body. The experiments (as many as 115) were made mostly on quite healthy subjects, and on few weak and anæmic persons, in the period of convalescence from various acute and chronic affections. The

duration of bath varied from fifteen to twenty minutes, and the temperature between 107.6 deg. and 114.5 deg. Fahr.; but, as a rule, the author used a fifteen minutes' bath, at the temperature of 108.5 deg. to 110 deg. Fahr. The water reached nearly up to the knee. He arrived at the following conclusions. 1. Under the influence of a hot foot-bath, the temperature in the external auditory meatus gradually rises, reaching its maximum within five minutes after bath. The elevation generally oscillates between 0.1 deg. and 0.3 deg. Reau., but sometimes is as high as 0.5 deg. Reau. 2. The axillary temperature in the vast majority of cases rises also, but less considerably. Its elevation mostly varies between 0.1 deg. and 0.2 deg. Reau., and never goes higher than 0.3 deg. Reau. (one case of 47 deg.) 3. The rectal temperature in the vast majority of cases decreases, reaching its lowest point after bath. The fall is persistent, and generally varies between 0.1 deg. and 0.3 deg., but sometimes (2 cases of 47 deg.) is equal to 0.4 deg. Reau. 4. Plethysmographic measurements of the upper extremity show that the volume of the limb in the first moments of the bath rather decreases, but then begins gradually to increase, reaching its maximum approximately about the mid-time of the bath, and remaining at the maximal height to the end. After the bath, it begins to decrease very slowly. 5. The measurements of the radial tension, taken by means of Basch's sphygmomanometer, show increase of it during the bath, and the next ten or fifteen minutes. The average increase is equal to 8 millimètres, maximal to 17 millimètres, minimal to 2 millimètres. 6. The observations on the character of the pulse-wave (in art. brachialis, studied by means of Rothe's and Knoll's apparatus) show that the latter presents all qualities described by Landois, Moens, Bernard, etc., as typical for a wave under high blood-pressure (the more round apex, the appearance of dicrotic indentation, and of so-called elastic elevations nearer to the apex, and so on). 7. The number of pulse-beats generally increases, the maximum of the increase being 24, the minimum 3, the average 5. After the bath, the acceleration of pulse disappears rather rapidly (comparatively with all other phenomena produced by the use of hot foot-bath).

27. *Kosorotoff on the Treatment of Toothache*.—The author says (*Vratch*, 1882, No. 8) that he, with invariable success, treats all his cases of toothache by administering the following mixture. R. Tincturæ belladonnæ, ʒss; tincturæ veratri albi, ʒj; tincturæ ligni guaiaci, ʒjj. Thirty or forty drops are taken in an ounce of *vodka* (brandy). With similar success, he applies the same medicines locally as follows. R. Tincturæ bellad., ʒj; tincturæ veratri albi, ʒjj; tincturæ ligni guaiaci, ʒs. These are mixed in a pint of *vodka*; a mouthful is kept on the side of the decayed tooth till the pain disappears. Dr. Kosorotoff alleges that the pain ceases within a few hours, never to return.

28. *Rosenblum on Collapse from Apomorphia*.—Dr. Rosenblum relates (*Proceedings of the Kaluga Med. Soc.*, 1881) two cases of sudden failure of the heart's action and death which occurred in boys aged 8 and 6 years, after the hypodermic injection of 1-30th to 1-45th of a grain of apomorphia. In both cases, the emetic action had been absent. The author recommends caution in the use of this remedy, especially in children. [These melancholy cases of death from such small doses of apomorphia are so extraordinary, as to allow some reasonable suspicions in regard to the purity of the drug used.—*Rep.*]

V. IDELSON, M.D.

MEDICINE.

RECENT PAPERS.

1. SCHÜTZ.—Aphasia as an Initial Symptom of Tubercular Meningitis. (*Prager Med. Woch.*, No 31, 1881.)
2. BERGER.—Idiopathic Spasm of the Tongue. (*Neurol. Centrall.*, No. 3, 1882.)
3. LEVEN.—On Vertigo.
4. SEMTCHENKO.—Febris Intermittens Larvata. (*Vratch*, 1881, No. 24.)
5. SKORCZEWSKI.—Floating Kidney. (*Przegląd Lekarski*, 1882, Nos. 1 and 2.)
6. BROUARDEL.—Sudden Death during an Attack of Hepatic Colic. (*Ann. d'Hygiène Publique et de Méd. Légale*.)
7. PITRES.—Spontaneous Falling off of the Nails in Ataxic Patients. (*Prog. Méd.*; and *Revue de Thér.*, May 15.)
8. HUNTER.—On Dysentery. (*Practitioner*, July 1882.)
9. YEO.—The Contagiousness of Pulmonary Consumption. (*Brit. Med. Jour.*, June, p. 895.)
10. BUMM.—Transitory Albuminuria and Mellituria in Delirium Tremens. (*Berl. Klin. Woch.*, 1882, No. 25.)

1. *Schütz on Aphasia as an Initial Symptom of Tubercular Meningitis*.—In the *Prager Med. Woch.*, No. 31, 1881, Schütz relates the case of a man who, without any other disorder than an enlarged elbow-joint, suddenly got disturbance of his speech without other phenomena of paralysis. He could understand and write down words, but could sometimes not articulate words, even if spoken out for him. The aphasia increased, and other symptoms appeared—headache, paralysis of facial nerve, and apathy, alternating with great disturbance and excitement. On the twelfth day, stiffness and pain in the nape of the neck appeared; the right eye was turned to the right, and its pupil was dilated. There were facial hyperæsthesia, râles in both lungs, slight cyanosis and incontinence, complete coma, stertorous breathing, retention of urine, and finally death. The temperature was elevated only at night to 38.6 deg. Cent. (101.5 Fahr.) It was at first thought that there was embolism of the artery of the Sylvian fissure; but, as the aphasia increased, and there was no cardiac lesion, this idea was abandoned, and tubercular meningitis resulting from tubercular chronic bone-disease, with tubercles in the brain-substance near the centres of speech (third left frontal convolution) was thought possible. The brain was, however, found free at the *post mortem* examination, whilst there was an aggregation of tubercles and copious exudation on the pia mater of the left operculum, as well as in the Sylvian fissure; less on the right side. The aphasia must, therefore, have been connected with the primary appearance of tubercles in the pia mater of the left hemisphere, and the histological changes which such an affection must cause in the brain-substance in its immediate neighbourhood. All the other rare cases which have had aphasia in tubercular meningitis had the affection better marked on the left side; no other case gives it as an initial symptom, it usually appearing late. The *post mortem* examination further showed acute general tuberculosis, right lobular pneumonia, and caries of the right ulna, which was regarded as having been the starting-point of the malady; and the author points out that this shows the importance of early surgical interference in primary joint-affections, provided the lungs are clear, this lessening materially the chance of general infection.

2. *Berger on Idiopathic Spasm of the Tongue.*—The isolated independent spasm of the tongue belongs to the rarest forms of spasm. Under the name 'aphthongic', Fleury described a singular neurosis in the hypoglossal region, in which each attempt at speaking called forth tonic and clonic spasms of the muscles of the tongue, which rendered articulation impossible. Berger (*Neurol. Centralbl.*, No. 3, 1882) has met with two cases, the first being that of a lady aged 28, neither nervous nor hysterical, in whom there appeared, during the last few years, whilst enjoying the best of health, a peculiar tension above the larynx, and a feeling of swelling in the tongue, followed, after one or one and a half minutes, by a rhythmical twitching of the tongue, which was propelled against the row of teeth at the rate of fifty or sixty a minute. During the attacks, which usually lasted from one to two minutes, speech was impossible. Other cephalic disturbances there were none, nor was there any anomaly either of the tongue or the oral cavity. A course of baths in Landeck, and the use of iron spas, brought about a cure after some time. The second case was that of a man in whom, after his fortieth year (now two and a half years ago), the tongue was periodically projected from the mouth with great rapidity and force, this happening sometimes several times in the week; at others, several times in the same day. The author assumes for both cases an irritable condition, either cortical or bulbar, of the hypoglossal nerve as the cause, and adds, as similar to the above, two observations which he has made on men aged 44 and 56, in whom there was spasm of the cremaster muscle, lasting two or three minutes, several times a day. Kissingen and Karlsbad waters cured the one case very nearly; in the second, the subcutaneous administration of atropine, and three weeks' galvanisation (positive pole on the spinal cord, negative pole to the scrotum) effected a cure. F. W. ELSNER.

3. *Leven on Vertigo.*—M. Leven, in a communication made to the Paris Biological Society on vertigo, states that cerebral anæmia does not explain the phenomenon; its attacks are arrested sometimes by the patient assuming a vertical position, sometimes by a horizontal one. Recent researches prove that vertigo is owing to disordered muscular sensibility, and that its cerebral centre (the centre of muscular sensibility of Charles Bell), of which not anything is known, is disordered. M. Leven does not consider that vertigo, frequently observed in dyspeptic patients, is due to anæmia resulting from their dyspeptic condition. Many dyspeptic patients suffer from vertigo who are not anæmic. M. Leven explains the phenomenon by the theory that the stomach transmits an impression to the brain, which, constantly irritated day and night, at a given moment communicates the impression to the cerebral centre of muscular sensibility. M. Leven mentioned several cases that had fallen under his observation, which supported the accuracy of his views.

W. VIGNAL.

4. *Semtchenko on Febris Intermittens Larvata.*—Dr. Semtchenko of Kazan (*Dnev. Kazan. Obstch., Vrach*, 1881, No. 24) records a case of febris larvata, in which the paroxysms imitated the symptoms of epidemic dysentery, which at the same time existed in the town. The malarial fever in this case was diagnosed on the following grounds; the intermittency of dysenteric phenomena, which appeared every third day at the same hour; a considerable enlargement and tenderness of the spleen; and the sudden cessation of diarrhoeal paroxysms, with sub-

sequent profuse perspiration. Quinine at once cut short all symptoms.

5. *Skórczewsky on Floating Kidney.*—Having examined 1,422 patients (1,030 females, 392 males) at a watering-place in Galicia, the author (*Przegląd Lekarski*, 1882, Nos. 1 and 2) found in 35 subjects (32 females, 3 males) floating kidneys. In 19 patients (2 males, 17 females, 9 of whom were pluriparæ, 8 multiparæ) the right kidney floated. In 11 patients (1 male, 4 multiparæ, 6 pluriparæ) the left kidney was movable. In 5 pluriparæ, both kidneys floated. Comparing his figures with those of Landau, Dr. Skórczewski concludes that the affection under consideration is far more common than it is usually supposed, and that physicians too often overlook its existence. He supports this statement by the fact that the 35 patients were sent on account of all possible diseases except wandering kidneys. On the subject of etiology, he differs from Landau, who asserts that a pendulous abdomen predisposes to renal displacement. According to Dr. Skórczewski, such displacement depends chiefly on the disappearance of circumrenal fat, on atony of tissues, subsequent to acute febrile diseases, and on pressure of some hypertrophied abdominal viscera. In the author's cases, there was very often observed co-existence of floating kidneys with malarial hypertrophy of the spleen. Such co-existence was noted in 13 out of 16 cases of the left displacement, and in 13 out of 24 cases of the right; and the author emphatically recommends examination of the kidneys in all malarial affections. V. IDELSON, M.D.

6. *Brouardel on Sudden Death during an Attack of Hepatic Colic.*—M. Brouardel relates, in the *Ann. d'Hygiène Publique et de Méd. Légale*, a case which is interesting from several points of view. A young woman, aged 30, in good health, after a quick walk, at the moment of getting into a railway-carriage, drank a glass of gooseberry syrup and seltzer water, and, some moments afterwards, was taken in the carriage with extremely violent pains in the abdomen. When arrived at her destination she could not get so far as her home, and went into a hotel, where a physician, who was called in, diagnosed hepatic colic, announcing that the symptoms would probably not last long. Notwithstanding this opinion, after alternate attacks of pain and quietness, the patient died suddenly in the night, ten hours after the first symptoms were felt. In consequence of the abnormal circumstances, a judicial necropsy was made five days after death. M. Brouardel found only a very small calculus in the common bile-duct, sixty-one calculi in the bladder, considerable submucous œdema in the duodenum and in the jejunum, and hæmorrhage uniformly infiltrating the parenchyma of the pancreas. Chemical analysis likewise demonstrated that there was no question of poisoning, as some persons had thought possible. Death in this case was, therefore, attributed to hepatic colic. Facts of this kind are very rare, and little known, although nearly all writers seem to anticipate the possibility of this sudden termination. M. Charcot, noting the constant lowering of the pulse in hepatic colic, attributed it not to the violence of the pain, which is frequently not excessive, but to a reflex action, induced by the irritation of the semilunar ganglion, and conveyed to the pneumogastric. The slackening of the pulse may thus go on to mortal syncope. Nevertheless, cases of sudden and rapid death, without perforation or sudden complications, are very rare. Portal reports two cases in which the patients died in the midst of a violent hepatic colic.

Curry and Boudet report two analogous facts. M. Durand-Fardel reports a similar result in an old woman; finally, M. Charcot reports a case taken from the *Med. Times* in which a woman, aged 33, who had had several attacks of colic and syncope, died sixteen days after the commencement of the attack. These facts comprise nearly all those of the kind related in medical literature. They differ in certain respects from those of M. Brouardel, both clinically and anatomically, but, from the medico-legal aspect, it is interesting to call attention to a cause of sudden death which is up to the present but little recognised.

7. *Pitrès on the Spontaneous Falling off of the Nails in Ataxic Patients.*—This phenomenon, which is not mentioned by any of the classic authors, is, perhaps, not so rare as is supposed. One case of it is mentioned in M. Arloing's thesis, and M. Pitrès has reported two cases in the *Progrès Médical*. In these two patients, both of whom had confirmed tabes, the nails of the great toes had come off spontaneously, without any trace of external violence. The loss of the nails was preceded for some weeks by a dull pain, and a sensation of irritation in the corresponding toes, without the lightning pains being more acute than usual. There was neither suppuration nor ulceration apparent at the matrix of the nail. The nails were rapidly replaced by new nails of normal formation. It is probable that the disorder is connected with disturbances of nutrition depending upon medullary lesions, analogous to perforating ulcers, spontaneous fractures, and various eruptions. In these two cases, the repeated falling off of the nails can scarcely be attributed to external violence. A sufficiently violent wound to bring on detachment of the nail would certainly have attracted the attention of the patients at the moment of its production, and eventually produced severe pain.

8. *Hunter on Dysentery.*—Dr. J. Dickson Hunter, in the *Practitioner*, July 1882, records some very valuable practical observations on this troublesome disease. Speaking of the etiology of dysentery, a subject far from settled, he conclusively shows that in many cases impure water is the cause. As regards treatment, he gives, as is just and right, the first place to large doses of ipecacuanha, given as follows. The patient is to be in bed, and a mustard poultice applied to the umbilicus for half-an-hour, and then, his stomach being empty, half of the following draught is to be taken: R. Pulv. ipecac., ʒi; liq. morph. hydrochlor., ʒi; aquæ, ʒij. The patient must then lie quiet, having the attention distracted as much as possible, endeavouring to retain the nauseous dose, which is sure, in most cases, to cause vomiting in half an hour or less. Fluids are to be avoided, and the patient must remain recumbent; and for five or six hours frequent attacks of nausea and vomiting will occur. The relief that follows a single dose is often marvellous; still, the next morning it is well to repeat the dose as before. Dr. Hunter thinks forty to sixty-grain doses even better than half-drachm doses. Many other valuable hints are scattered through the paper, well worthy the perusal of those who are actively engaged in treating dysenteric cases.

9. *Yeo on the Contagiousness of Pulmonary Consumption.*—In the *Brit. Med. Jour.* for June 1882, p. 895, is a lecture by Dr. Burney Yeo, in which the conclusions of the writers on this subject are critically investigated. Consumption is not contagious in the common acceptance of the term; but the author has found from his experience that it is twice as common

for a wife to take consumption from her husband as for the husband to take it from the wife—a significant fact. Dr. Yeo shows, from numerous experiments of Martin and others, that phthisis depends on the inoculation of a specific virus, the tubercle-bacillus, which increases in activity by inoculation in a series of animals of the same or allied species, and that the inoculation of matter obtained from tubercles, secondary to the inoculation of non-tuberculous materials, never gives rise to true tubercle. Much stress is laid on the observation of Koch that for the cultivation of the tubercle-bacillus a temperature not less than 84 deg., and not more than 104 deg., is necessary; and it is suggested that this fact may be a main cause of the contagiousness of the disease; a view supported by the fact that consumption is regarded as contagious in the South of Europe. The possibility of conveying tubercular disease to children by feeding them with the milk of consumptive cows is also touched on.

R. NEALE, M.D.

10. *Bumm on Transitory Albuminuria and Melituria in Delirium Tremens.*—After mentioning the statistics of Fürstner and Weinberg, showing that in 33 to 40 per cent. of cases of uncomplicated delirium tremens there is albuminuria, and albuminuria in proportion to the severity of the delirium, Dr. Bumm records the case of a patient, aged 31, who died suddenly during an attack of delirium tremens. On admission (*Berl. Klin. Woch.*, 1882, No. 25), the urine contained a considerable quantity of albumen and sugar, but on the following day there was no trace either of albumen or sugar. During the night, the urine contained sugar, but no albumen. Next day, the patient was somewhat quieter, but sank back suddenly, dead. The patient's family and previous history were good, with the exception of the alcoholism and a slight attack of articular rheumatism. The *post mortem* examination showed chocolate-coloured hyperæmia of the brain and medulla oblongata. In the base of the right lung was a localised pneumonia, about the size of a nut; the liver showed traces of fatty degeneration; the kidneys, with the exception of marked hyperæmia, showed no abnormality. Whether a local hyperæmia of the kidneys is the cause of the albuminuria so frequently observed or not, Dr. Bumm considers that this cannot explain the mellituria present in this case, and he inclines to think the cause of both lies in a central nervous alteration. He considers that the experiments of Claude Bernard and Flourens justify him in believing that the rapidly changing cerebral hyperæmia, extending to the albumen and sugar centre of Bernard, and the *naud vital* of Flourens, caused first the albumen and sugar in the urine, and finally the sudden death. Dr. Bumm's report does not mention whether there is any proof that the patient's urine contained no sugar before his illness.

JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. SZYDLOWSKY.—A Proposed Modification of Es-march's Method. (*St. Petersb. Med. Woch.*, No. 13, 1882.)
2. DIEM.—The Use of the Constant Current and Compression in the Treatment of Sympathetic Indolent Bubo. (*Erst. Intell.-Blatt.*, No. 22, 1882.)
3. MACGREGOR.—Avulsion of the Tibialis Anticus. (*Lancet*, May 1882, p. 820.)

4. HEWETSON.—The Relative Value of Methylated and Rectified Ether. (*Lancet*, June 1882, p. 1072.)

5. DAVIES-COLLEY.—A Case in which the Neck was Transfixed by a Walking-Stick. (*Lancet*, June 1882, p. 986.)

6. LAMPUGNANI.—The Radical Cure of Hydrocele. (*Gaz. Med. Ital.*, June.)

7. SCHRUMPF.—The Treatment of Angioma by Compression. (*Gaz. Med. de Strasb.*, 1881.)

8. DE LAPRADE.—The Treatment of Fungous Arthritis by Intra-articular Abrasion. (*Thèse de Paris.*)

9. POULET.—Exostosis of the Inferior Extremity of the Humerus. (*Revue de Chir.*, April 1882.)

10. POLAILLON.—Subcutaneous Section of Adhesions for the Reduction of Old Dislocations of the Shoulder. (*Revue de Chir.*, April 1882.)

11. KOTINSKI, T. F.—On 103 Cases of Internal Urethrotomy. (*Gaz. Lekarska*, 1881, Nos. 48-50.)

12. BUSCH.—A Case of Cysto-Lymphatic Tumours in the Pectoralis Major. (*Berl. Klin. Woch.*, No. 25, 1882.)

13. STEIN.—Diagnosis of Rupture of the Rectum. (*Annals of Anat. and Surg.*, July 1882.)

14. QUÉNU.—Spontaneous Rupture of the Bladder. (*Revue de Chir.*, No. 3, 1882.)

15. OLLIER.—A Case of Fracture of the Olecranon.

16. KUH.—Resection of the Pylorus. (*Archiv für Klin. Chir.*, Band xxvii.)

1. Szydlowsky on a Proposed Modification of Esmarch's Method.—In No. 13 of the *St. Petersb. Med. Woch.*, 1882, this author proposes a modification of Professor Esmarch's method of obtaining artificial bloodlessness, which consists in preparing a piece of India-rubber tubing much after the fashion of the rings which are placed round horses' fetlocks to prevent galling, and rolling this ring up the extremity from the periphery, driving the blood backwards, and then leaving the ring *in situ*, with the intervention of a wad of lint to act as a compress over the artery at some point opposite a bony prominence. The advantages he claims for this method are: greater rapidity of application; its cheapness compared to the real Esmarch's bandage; lighter weight, therefore greater transportability in the field (see Esmarch's article on the elastic girth as a tourniquet, and others of minor importance). [The method described by M. Szydlowsky is that which is adopted in Australia when producing artificial bloodlessness for operations, the impression there being that this was Esmarch's original method. The process was explained to the reporter 2½ years ago by a young Australian medical man who came to the British Isles for study, and wondered that Britain was so far behind as not to know the proper mode of applying Esmarch's apparatus.]

2. Diem on the Use of the Constant Current and Compression in the Treatment of Sympathetic Indolent Bubo.—This author (*Aerzt. Intell.-Blatt.*, No. 22, 1882) has had remarkable success in three cases by treating with the constant current, which is applied by means of a plate and a button electrode, with interrupting apparatus, applying compression immediately after passing a current through three different diameters of the bubo. Reiniger's apparatus was used, and from ten to twenty elements, the sitting lasting a quarter of an hour. After the sitting, the tumour is found softened, the individual glands are more palpable and movable, and an alteration of the circulatory and nutritive systems is made manifest by the improved condition of the inside of the swelling. Compression is applied by means of a pad of jute and a tight-fitting bandage of

flannel. Diem recommends his method for the treatment of chronic inflammatory—not painful, but considerable—swellings of the groin with fistulous ulcerations.

F. WILLIAM ELSNER.

3. Mac Gregor on Avulsion of the Tibialis Anticus.—In the *Lancet*, May 1882, p. 820, a singular case is reported, where a lad rolled off the roof of an outhouse, and caught his leg in a protruding hook, which caught the tendon of the tibialis anticus, and tore the whole muscle out, so that it lay on the dorsum of the foot. The lad suffered no pain; indeed, enjoyed the consternation and distress of his relatives. The muscle was cut away, and the wound covered with a carbolio pad, and healed in less than three weeks, the lad neither limping nor halting in his walk.

4. Hewetson on the Relative Value of Ether when Prepared with 'Rectified' or Methylated Spirits of Wine.—Mr. H. B. Hewetson, in the *Lancet*, June 1882, p. 1,072, advocates the use of methylated ether, to the exclusion of rectified ether, as an anæsthetic. The cost is one-half, and the anæsthetic powers are much greater, patients often being 'fully under' in less than one minute.

5. Davies-Colley on a Case in which the Neck was Transfixed by a Walking-Stick.—In this case, reported in the *Lancet*, June 1882, p. 986, a lad was walking along the side of the kerb carrying a stick as thick as his index finger, when he slipped, and fell upon it. The blunt point entered his neck on the right side, and passed out, projecting two inches on the opposite side. With his neck thus transfixed, he walked 250 yards to a doctor, who pulled it out, and sent him on to the hospital. Very little blood had escaped from the left wound; none from the right. There were really no symptoms, and evidently the stick had passed between the vertebra and pharynx without wounding any vessels. The case is of interest, as it illustrates the ease with which a blunt-pointed instrument pushes aside, without injury, the large blood-vessels.

RICHARD NEALE, M.D.

6. Lampugnani on the Radical Cure of Hydrocele.—Dr. Lampugnani, in the *Gaz. Med. Ital.* of June 1882, gives a careful *résumé* of the literature of hydrocele, illustrating his own plan of treatment by sixteen cases, in none of which did any relapse occur. His treatment is as follows: puncture with a capillary trocar attached to an aspirator; injection of hydrate of chloral and distilled water in equal parts, and in a quantity corresponding to the volume of the hydrocele; cold fomentations to relieve pain; the repetition within a brief period of the puncture, and the injection in cases where absorption is taking place too slowly; baths of mineral water as adjuvants. An analysis of the cases is given, with the length of time they were under treatment. The advantages claimed by the author for his method are diminished risk of relapse, with considerable curtailment of the time of treatment.

LITTON FORBES.

7. Schrumpf on the Treatment of Angioma by Compression.—Schrumpf (*Gaz. Med. de Stras.*, 1881) has successfully treated erectile angioma on the arms of two infants, by compression with strips of sticking-plaster. The plaster was covered by a bandage, which was renewed weekly. A cure was effected in the one case in seven weeks, in the other in four months.

8. De Laprade on the Treatment of Fungous Arthritis by Intra-articular Abrasion.—Dr. De Laprade in his *Thèse de Paris*, 1880, says that fungous ar-

thrititis, in a large number of cases, does not present deep osseous lesions. The fungosities are at first developed on the internal surface of the synovial membrane. The bone undergoes consecutive changes from their presence, which are confined to the surface. It is therefore useless to sacrifice an osseous mass simply surrounded by a fungus which has slightly changed the surface. In consequence of this reasoning, M. Létiévant of Lyons has discarded resection, and relies on intra-articular abrasion in the treatment of fungous arthritis of recent origin. In order to perform the operation, Esmarch's bandage should always be used. The operator should have at hand one or more bistouries, cannulated sounds, spatulas, blunt hooks for the synovial membrane and the bones, curettes of all sizes, straight and curved scissors, and ruginators. The capsules should be incised to a length of several centimètres, and the articular ends should be made to project, and even be temporarily displaced, so as to follow up the granulations. When the operation is finished, the surgeon should leave one or two drainage-tubes in the wound, and apply antiseptic dressing with the greatest care. A great advantage by abrasion over resection is the absence of consecutive shortening. This treatment of fungous arthritis has up to the present time given excellent results. Several patients who have been operated upon are not yet cured, therefore it is not possible to judge of the method in an absolutely definitive manner.

9. *Poulet on Exostosis of the Inferior Extremity of the Humerus, Nerve-Troubles probably due to Compression of the Median and Ulna Nerves.*—The exostosis (*Rev. de Chir.*, April 1882) had involved the median nerve in its centre. M. Poulet set free the nerve, and thought it right to stretch it. The wound healed in a month, notwithstanding an attack of erysipelas, but the functional troubles remained. Owing to a prolonged treatment, consisting chiefly in electricity and progressive gymnastics, up to the time of the report there were neither symptoms of paralysis nor of atrophy, and the patient, who is *enfant de troupe*, is able to remain in the army, and do his work. The most curious part of the case is that the functional troubles were in connection with the ulnar and the median nerves, whilst the latter of these nerves was alone involved in the exostosis. M. Poulet thought that the most probable hypothesis by which this fact could be explained, was the possible existence of an ascending nervous filament. It is known, in fact, that the median nerve arises by two roots, of which the internal is common with the ulnar.

10. *Polaillon on Subcutaneous Section of Adhesions for the Reduction of Old Dislocations of the Shoulder.*—The subcutaneous section of adhesions, tendons, and ligaments, although performed in reducing old dislocations of other joints, has not often been had recourse to for the shoulder. M. Polaillon records (*Rev. de Chir.*, April 1882) a case, and concludes his paper with the following propositions. 1. When an old dislocation of the shoulder resists a traction of 100 to 150 kilogrammes under an anæsthetic, then section of the adhesions is indicated. 2. This section ought to be made subcutaneously, and with antiseptic precautions. 3. In the first place, a sharp-pointed tenotome is to be passed beneath the acromion up to the head of the humerus; in the second place, a blunt-pointed tenotome is substituted, with which the fibrous tissues are to be cut in front of the bone, then at the back, and even upon the sides. It is desirable, before performing this operation, to

ascertain the position of the vessels and nerves. 4. Attempts at reduction are to be made two or three days after the section, and if the bone cannot then be replaced, it may be considered that the dislocation is beyond the resources of art.

E. NOBLE SMITH.

11. *Kosinski on Internal Urethrotomy.*—Professor T. F. Kosinski, in a very interesting article based on his own 103 cases of (Maisonneuve's) internal urethrotomy (*Gazeta Lekarska*, 1881, Nos. 78-80), points out the advantages of this treatment of urethral stricture. The operation he regards as extremely simple and easy, and the injury caused by Maisonneuve's instrument as very slight and entirely free from any danger. The wound heals rapidly, and the subsequent introduction of bougies, practised during certain (considerably long) periods, successfully completes the treatment. The author's cases were all severe; some of them were complicated by urethral and vesical fistulæ, and the operation was resorted to only after gradual and slow dilatation had utterly failed to make the stricture permeable. Nevertheless, in all 103 cases, cure very rapidly followed. All patients got up in a few days after the operations, and, two weeks later, they returned to their occupations. Fistulæ very often closed spontaneously after the urethra had recovered its lumen. The author advises to split the anterior wall of the meatus, following the median line. After the operation, he leaves a soft elastic catheter *à demeure* for twenty-four to thirty-six hours; afterwards, the patient voids urine by the natural passage. In one-third of all the cases, on the third or fourth day after the operation, there was a considerable rise of temperature (to 102 to 104 deg. Fahr.), followed by profuse perspiration; the further course did not show anything peculiar. [In the LONDON MEDICAL RECORD, Nov. 1879, p. 443, there is to be found a report of Gregory's memoir on operative treatment of urethral stricture, based on the study of 916 cases of internal and 992 of external urethrotomy. He finds the former dangerous and useless, and attributes to the latter 'absolutely' no danger, but very many advantages.—*Rep.*]

V. IDELSON, M.D.

12. *Busch on a Case of Cysto-Lymphatic Tumour in the Pectoralis Major.*—The following is an abstract of a case reported by Professor F. Busch in the *Berl. Klin. Woch.*, No. 25, 1882. The patient, a thin and apparently cachectic man, aged 63, first noticed at the end of 1881, after having suffered much from pains in the arm, a swelling in the axilla on the same side. This gradually increased, and, after a time, prevented the patient from working. When the case was first seen by Professor Busch the right axilla was occupied by a tumour of the size of the fist, which was soft, fluctuating, and covered by stretched and slightly congested skin. Between this tumour and the sternal extremity of the clavicle, and covered by the pectoralis major, were some smaller tumours. Professor Busch was unable to form a decided opinion as to the precise nature of these growths, until their removal by operation on March 8th. An incision was made from the posterior border of the axilla over the large tumour and carried to the inner extremity of the clavicle. The pectoralis major having been cut through in the direction of the superficial wound, a continuous chain of tumours of variable size was exposed. These growths were all of soft consistence, and some contained cheesy masses of inspissated pus. The large axillary tumour, however,

contained perfectly colourless watery fluid. The case was now found to be one partly of caseation of the lymph-glands, and the large cyst was thought to have been the result of accumulation of lymph, the cellular constituents of which had been deposited during the stagnation, causing the fluid contents of the cyst to become clear and thin. In order to remove the inner mass of degenerated lymph-glands, it was found necessary to remove a considerable portion of the pectoralis major. The whole of the large cystic tumour was not removed, in consequence of the close connection of the outer portion of this growth with the main axillary vessels. The large wound was then plugged with antiseptic gauze, and covered by Lister's dressing. During the healing of the wound, there was a free and continuous discharge, which consisted mainly of lymph. This lymph, during the changes of dressing, was seen to flow in a fine stream from a small funnel-shaped opening just below the sternal end of the clavicle. This Professor Busch regarded as a back current from the right lymphatic duct, discharged through the central opening of the divided lymph-channel between the upper extremity and the thoracic cavity. The healing of the large wound, though unattended by general or local reaction, was very slow, and, after an interval of a few weeks, was arrested. Early in May the right upper extremity became oedematous, and the general health failed. The patient died on May 22nd from exhaustion after severe diarrhoea. On *post mortem* examination, the axillary vein was found imbedded in a large mass of soft and spongy tissue, and it contained a free red thrombus. There were signs of external tubercular disease of both lungs, and of tubercular ulceration of part of the ileum and of the large intestine. The most probable interpretation of this rather obscure case is, Professor Busch states, that a tubercular pulmonary phthisis gave rise to a caseous degeneration of the axillary glands, which glandular affection, by causing an arrest in the flow of lymph, led to the formation of a lympho-cystic swelling. After the extirpation of these glands, the pulmonary disease progressed, and, together with the diarrhoea due to associated tubercular diseases of the intestines, caused the death of the patient.

13. *Stein on the Diagnosis of Rupture of the Bladder.*—The following is a summary of a section on the symptoms and diagnosis of rupture of the bladder included in an elaborate study of this injury, contributed by Dr. A. W. Stein of New York to the *Annals of Anat. and Surg.*, July 1882. The symptoms of rupture of the bladder are usually these. In consequence of fracture of the pelvis, or perhaps simply from shock, the patient is unable to walk, or even to rise from the place where he has fallen. There are severe pain over the hypogastrium, and an incessant desire to micturate, with an inability to void more than a few drops of urine mixed with blood. Constitutional symptoms indicative of great prostration rapidly ensue, and death occurs generally in a few hours, or, at the farthest, a few days, the prostration being greater and the fatal result occurring sooner in intraperitoneal than in extraperitoneal ruptures. The evidence furnished by the use of the catheter is of special value, when it is positively known that the individual had not micturated for several hours previously to the accident; for, under these circumstances, an empty bladder, or one containing but a small quantity of sanguinolent urine, is strongly confirmatory of laceration of the bladder. The evidence pointing to rupture of

the bladder, however, is by no means always unequivocal, as the signs and symptoms upon which we would most depend are often absent. Especially is this the case in the beginning, when a long interval of time may elapse between the receipt of the injury and the development of characteristic symptoms. Not only may the first symptoms be delayed, or be insufficiently marked to attract attention, but the vesical rupture may be complicated with other injuries, the symptoms of which may for a time obscure the more dangerous lesion within. In traumatic rupture of the bladder, there is rarely any external sign or mark of injury to be found over the bladder. Standing, or even walking, is not inconsistent with the existence of laceration of the bladder; neither is difficulty or inability of micturition a uniform symptom. The absence of difficulty in voiding urine has been observed in both extraperitoneal and intraperitoneal ruptures. The marvellous retentive power of the bladder that has been noted in some cases, would seem explicable only on the supposition that at first the rupture was incomplete, or that the vesical wound was closed by valvular protrusions, which prevented the escape of urine. An instance is cited of a man who was injured in a fall, and manifested symptoms which led to the diagnosis of laceration of the intestine. The catheter evacuated a large quantity of perfectly clear urine. In twenty-four hours the man died, and the necropsy revealed a large rent in the bladder, into which a coil of intestine had slipped and become engaged. Many cases might be cited to show that the presence of clear urine in the bladder cannot be accepted as an evidence of the absence of injury to the viscus. On the other hand, the sudden advent of blood in the urine is nothing more than presumptive evidence, strong though it may be, of rupture of the bladder. The urine may be tinged with blood from simple contusion of the bladder, without laceration. Important as it is to establish the diagnosis early in all cases, it is even more important to ascertain whether the rupture is intra- or extra-peritoneal. In the early stage of the case, such a differential diagnosis is most difficult, often impossible. As to the significance of peritonitis as an element in diagnosis between intra- and extra-peritoneal ruptures, it is nothing more than strongly suggestive of the former. The development of peritonitis in a given case does not necessarily denote a laceration of the peritoneum, as inflammation of this membrane occurs in extraperitoneal ruptures not at all unfrequently, either as the direct result of violence independent of the injury to the bladder, or as the consequence of the propagation of inflammation from subjacent parts. In extraperitoneal rupture, the urinary infiltration is apt to present a localised or circumscribed swelling, limited, perhaps, to one side of the body, while in intraperitoneal rupture the tumefaction is more general and uniformly globular over the abdomen. Last, but not least, comes digital exploration of the interior of the bladder. This, in the male, may be effected through a small median perineal incision, made on a staff in front of the prostate. Dr. Stein states that the practicability of this procedure has been verified, that its execution is both simple and safe, and that, as a means of diagnosis, it is without doubt the most efficient and reliable at our command.

14. *Quénu on Spontaneous Rupture of the Rectum.*—An original memoir, by M. E. Quénu, in the *Revue de Chir.*, No. 3, 1882, contains a report of a case of spontaneous rupture of the rectum, which was ob-

served by the author, and also six other reports of similar cases collected from different sources, including the first recorded instance of this rare lesion, given in 1827 by Brodie. By spontaneous rupture, M. Quénu implies a laceration of all the coats of an apparently healthy rectum, produced under the simple influence of an effort. This lesion is of rare occurrence, as but nine cases have hitherto been published. It has been observed only in adults, and almost always in females. In most of the recorded cases, it had been preceded by prolapse. In four instances, the rupture occurred during defecation; in one case, that recorded by Brodie, during vomiting; and in another, during an endeavour to lift a very heavy weight. The lesion is produced suddenly, and results at once in the protrusion and strangulation of a large mass consisting of small intestine and mesentery. In a case, reported in 1845 by Adelman, the length of the protruded portion of intestine was five yards. The direct reduction of this mass was in most cases attended with much difficulty, which, indeed, in these cases proved insurmountable. This difficulty is to be attributed, M. Quénu points out, to the small extent of the wound in the rectal wall, to the mobility of the intestinal mass, to the necessity, in attempt at reduction, of acting more or less obliquely instead of perpendicularly on the rectal wound, to the tendency of the intestine to pass up the rectum instead of through the small constricting orifice, to distension of the intestinal loops by gas and fæcal matter; and, finally and mainly, to the difficulty in making out the order in which the different portions of the intestinal mass have been protruded. In cases where reduction cannot be effected by direct and external pressure, it becomes necessary to perform laparotomy, and then to replace the intestinal mass by gentle traction from within. Before the wound in the abdominal wall is closed, a suture should be applied to the slit in the rectum, in order to prevent any further hernial protrusion and the passage of fæcal matter from the rectum into the peritoneal cavity. M. Quénu discusses the question whether it might not be advisable, the gravity of the lesion being considered, to open the abdomen and to close the rectum by suture, even in instances where direct reduction could be effected; the impossibility of applying such suture from the interior of the intestine being, of course, assumed. M. Quénu, in studying the details of the five most carefully reported cases, found that there was in those cases great variability in the situation of the rectal solution of continuity. This may be situated at any part within a distance of five inches above the anus, and may occupy the anterior or the posterior wall or recto-vaginal septum. It is most frequently longitudinal in direction, and its length may vary from two to seven inches. Rupture of the rectum may, M. Quénu holds, be produced in one or other of two different ways. It is probable, he states, that in some cases it may be the result of prolapse, and of the formation, by the prolapsed wall of the rectum, of a true hernial sac, into which distended loops of small intestine may be forced during a violent effort. This effort, being kept up, may increase the pressure in the interior of the rectum, and contribute to strangulate the pedicle of the hernia. The vessels of the rectum become distended, and, at any moment, the contents of the hernia may break through the œdematous, inflamed, and degenerated wall of the sac. Basing his views on the pre-existence of prolapse in most of the recorded cases of spontaneous rupture of the rectum,

and on the discovery, after death, in the case observed by himself, of traces of previous inflammation of the rectal mucous membrane and of venous hæmorrhage, M. Quénu is of opinion that the rectal lesion may also be due to the prolapse, or rather to the results of this condition. Prolapse causes inflammation of the mucous membrane of the rectum, and dilatation and structural alteration of the veins. Some effort on the part of the patient may cause rupture of one of these degenerated veins, and the blood thus poured out into the diseased walls of the rectum may render these still weaker and cause them to give way. It is suggested that the very rare injury of spontaneous rupture of the œsophagus may be similarly produced by the effusion of blood into the walls of this tube, previously altered through some inflammatory process.

15. *Ollier on a Case of Fracture of the Olecranon.*—In June last, M. Ollier presented to the Société Nationale de Médecine of Lyons, a preparation taken from a man, aged 44, on whom he had practised osseous suture of the olecranon for fracture of this process with sloughing of the skin, exposure of the cavity of the joint, and penetration of air. Two channels having been bored in the head of the ulna, a wire suture was passed over the anterior aspect of the olecranon, so as to include this process in the concavity of the loop, and then the two ends of the wire were carried through the channels in the head of the ulna, and twisted and made fast, so as to keep the large and small fragments of the ulna in contact. Two small drainage-tubes were inserted into the joint at each side of the olecranon, and the surface of the elbow was covered by Lister's dressings. The patient did well during the after-treatment, but, on the forty-sixth day, when the wound was almost completely closed, he committed suicide by throwing himself out of a window. On *post mortem* examination of the elbow, the fragments were found to be united by a cellulo-fibrous tissue, not as yet very resistant, but maintaining in regular apposition the surfaces of these fragments. It was interesting to observe in this case, M. Ollier states, the persistence of the cartilages, which, though they certainly had lost a little of their polish, still existed over the whole extent of the interior of the articulation, except at one point where they had been worn away by reciprocal pressure of the opposed bones. After a compound fracture into a joint, and subsequent suppuration, the cartilages, it is pointed out, are rapidly destroyed, and the osseous surfaces become ankylosed. On the other hand, when an injury of this kind is treated antiseptically and by Lister's dressings, inflammation and suppuration of the joint may be prevented, the structure of the cartilages may be maintained, and the movements of the joint may subsequently be re-established, although its cavity has been traversed by metallic sutures.

16. *Kuh on Resection of the Pylorus.*—Dr. E. J. Kuh of Heidelberg, reports in von Langenbeck's *Archiv*, Band xxvii, Heft 4, a case of malignant disease of the pylorus, in which resection was successfully performed by Professor Czerny. The subject of this case was a man, aged 28, who, for ten weeks before admission into hospital, had suffered from pain in the epigastrium, and abdominal distension after every meal, and, for six weeks, had constantly vomited sour and ill-smelling fluid, about two hours after having taken food. When first seen by Professor Czerny, the patient was much emaciated, and the stomach was found to be much distended, and

reached almost as far as the symphysis pubis. In the region of the pylorus could be felt a hard and movable tumour, smooth at its surface, and tender on pressure. After frequently repeated injection into the stomach of a solution of salicylic acid, the operation for the removal of the diseased pylorus was performed, with antiseptic precautions, about five weeks after the date of the patient's admission. The tumour having been exposed by an incision, four inches in length, made in the middle line of the anterior abdominal wall, and passing through the navel, the greater and the lesser omentum were carefully detached, and all bleeding vessels secured. On incision of the anterior wall of the stomach at its pyloric extremity, the swelling was found to consist not of one tumour, but of several large, warty, but not ulcerated, nodules on the inner surface of the pylorus, the coats of which were uniformly thickened, so that a considerable degree of stenosis had been established. The diseased pylorus was then separated by scissors, first from the stomach, and afterwards from the duodenum, the two openings of the divided intestinal canal being closed by the fingers of an assistant, and by Nélaton's forceps. The edges of the gastric and duodenal orifices were brought into contact by closely applied catgut sutures. The operation lasted during two hours and a quarter. The isolation of the diseased portion of the pylorus was, it is stated, attended with some difficulty, and, during the dissection, there was bleeding from a number of small vessels. During the operation, forty-eight ligatures were applied: eight to the edges of the wound through the abdominal wall, and forty to the divided intraperitoneal vessels. The diseased structures presented, on microscopic examination, the characters of colloid carcinoma. The patient recovered without the appearance of febrile or other unfavourable symptoms. During the after-treatment, he remained free from vomiting, and tenderness in abdomen. Solid food was taken on the fifth day, and, at the end of the third week, the patient was able to leave his bed. The weight of the body was increased by eleven pounds in the course of the first five weeks after the operation, and by twenty-nine pounds in four months. When last seen, after an interval of five months, the patient was in good health.

W. JOHNSON SMITH.

PHYSIOLOGY.

RECENT PAPERS.

1. LESSHAFT.—The Situation of the Stomach, the Relations of its Form and its Functions. (Virchow's *Archiv*, Band lxxxvii.)

2. REGNARD.—The Results of Feeding Herbivorous Animals with Nitrogenous Food. (*Bull. de la Soc. de Biol.*)

3. ROSENTHAL.—The Action of Electrical Stimulation of the Vagus. (*Centralbl. für die Med. Wiss.*, 1882, No. 22.)

4. SPECK.—On the Relation of Mental Activity to Tissue-Metamorphosis. (*Archiv für Pathol. und Pharm.*, Band xv.)

5. TROITZKY, T. V.—On the Influence of Tobacco-Smoking on the Temperature and Pulse in Healthy Persons. (*Vratch*, 1882, No. 7, pp. 103-4.)

1. Lesshaft on the Situation of the Stomach, and the Relations of its Form and its Functions.—Dr. Lesshaft (Virchow's *Archiv*, Band lxxxvii, Heft 1)

relates his investigations of 1,200 bodies, and essentially confirms Luschka's statements on this subject. He considers that the stomach is generally placed vertically with the fundus upwards, the greater curvature to the left, and the lesser to the right, and, in its upper half, a little downwards. The middle line of the body bisects the antrum pyloricum. The pylorus looks to the right, and corresponds with the right border of the sternum. The walls of the stomach look forwards and backwards. The stomach is fixed by peritoneal folds in such a manner that movement or rotation round the long axis of the organ, bringing the greater curvature forwards, is not possible. Only an even expansion can be conceived, by which the greater curvature moves downwards, and to the left. Dr. Lesshaft distinguishes four muscular layers in the stomach, two of longitudinal fibres, and two of circular or oblique; the outer horizontal, and the innermost circular and oblique layer, being continued from the corresponding structures in the œsophagus. In two cases he discovered fine bands of striated muscular fibre leaving the diaphragm, and losing themselves in the true circular layer. By the contraction of the longitudinal and circular fibres, the food within the stomach is moved from the cardiac to the pyloric end. In consequence of the more powerful muscular apparatus, and the consequent narrowing of the organ, the food is here spread out, and squeezed back to the less powerful cardia along the middle line of the stomach. Changes of the stomach's position are only possible from great gaseous distension of the transverse colon, or of the small intestine. [In a discussion raised by Dr. Lesshaft on this subject, at the International Congress of 1881, in which several distinguished anatomists took part, his views as to the vertical position of the stomach found no support, all the authorities being agreed that the oblique position was the normal condition.—*Rep.*] E. CLIFFORD BEALE.

2. *Regnard on the Results of Feeding Herbivorous Animals with Nitrogenous Food.*—M. Regnard (*Bull. de la Soc. de Biologie*), bearing in mind that all attempts to feed herbivorous animals on what, in ordinary parlance, is called butcher's meat, failed completely, and that the animals under experiment preferred starving rather than eat the raw or salt meat offered to them, conceived it to be possible to substitute animal blood procured at the slaughter-houses. In order to test the practical value of this idea, he obtained some lambs abandoned by their mother, which as a rule die. The blood administered to them was first coagulated under the influence of a temperature of 100 deg. Cent., then pressed and quickly dried over a stove, and finally ground to fine powder in a coffee-mill. This powder, which is tasteless, is inodorous, and cannot putrefy, was mixed among 4 lbs. of beetroot and 500 grammes of hay; a form of food adopted for young lambs in the farm of 'The Joinville Agricultural School'. Six lambs in an almost dying condition, each two months old, and weighing about 6 kilogrammes, were chosen for experiment. Three were fed on the ordinary ration; the three others had the ordinary ration with the addition of the blood-powder. The animals after a little while sought out the morsels of food impregnated by the blood-powder. The animals fed according to the nitrogenous regimen in two months and a half trebled in weight, and were finer than lambs of the same age suckled by their mothers. The remaining three, fed exclusively on vegetable diet, scarcely increased in weight. The blood thus utilised would

be otherwise treated as refuse; only a very small quantity is used in the manufacture of cyanides.

W. VIGNAL.

3. *Rosenthal on the Action of Electrical Stimulation of the Vagus*.—From experiments made with his simplified phrenograph (a lever fitting the curvature of the liver, and transmitting the diaphragmatic movements by means of a Marey's capsule to an index), Dr. Rosenthal has reached certain conclusions, which he summarises thus (*Centralbl. für die Med. Wiss.*, 1882, No. 22). 1. There are in the vagus certain fibres, probably coming from the lungs, the stimulation of which acts on the respiratory centre, causing the respirations to become more frequent and weaker, or, with a stronger stimulation, causes them to cease in the state of moderate inspiration. These he terms 'regulating fibres'. 2. In the superior laryngeal nerve are fibres, the stimulation of which makes the respirations less frequent and deeper, or with a stronger stimulation entirely checks them. These he calls 'inhibitory nerves' of the respiratory centre, analogous to the inhibitory nerves of the heart. 3. In the inferior laryngeal nerve are fibres, the stimulation of which also arrests respiration in the stage of expiration; but which cannot be the same as the last mentioned, as they cease to act when the stimulation is very strong, when the animal is narcotised, and when the cerebrum is removed. They are probably sensory nerves acting like other sensory nerves, only indirectly on the respiratory centres. 4. Large doses of chloral-hydrate ($4\frac{1}{2}$ grains injected into the jugular vein of a rabbit) totally prevent the action of the regulatory fibres, but leave the inhibitory fibres unaffected.

JAMES ANDERSON, M.D.

4. *Speck on the Relation of Mental Activity to Tissue-Metamorphosis*.—Dr. Speck (*Archiv. für Pathol. und Pharm.*, Band xv), after numerous and careful experiments on himself and others, concludes that mental work does not to any perceptible degree affect the metamorphosis of the tissues of the body. The total quantity of the urine is not altered, nor are the urea, uric acid, chlorides, or sulphates increased or diminished. Contrary to expectation, there is not the slightest increase in the excreted phosphates. The proportion also of oxygen, nitrogen, and carbonic acid in the respired air, is much the same as when the brain is not actively engaged. The molecular changes which occur in the brain during its activity are, therefore, either not oxidation-processes, or, if so, are so little in amount as to escape detection by the methods of investigation employed.

5. *Troitzky on the Influence of Tobacco-Smoking on Temperature and Pulse*.—In order to ascertain the influence of moderate tobacco-smoking on temperature and pulse in normal subjects, Dr. J. V. Troitzky (*Vratch*, 1882, No. 7) made 600 observations in twenty-five persons, grouped into three categories according to their constitutions: 1. Those of delicate constitution; 2. Those of ordinary constitution; 3. Those of strong constitution. The observations were made twenty times daily, from 9 A.M. till 12 P.M. The author summarises his results as follows. 1. In persons of ordinary constitution, on non-smoking days, the average daily temperature was 36.76 deg. C. (98.16 Fahr.), and the pulse 72.9; on smoking days, the respective figures were 37.02 deg. Cent. (98.64 Fahr.), and 89.9. In persons of delicate constitution, on non-smoking days, the average daily temperature was 36.6 deg. C. (97.88 Fahr.), and the pulse 69.3; on smoking days, the figures were 37.03 deg. C. (98.64 Fahr.), and 81.2.

3. In strong persons, on non-smoking days, the figures were 36.8 deg. C. (98.06 Fahr.), and 72; on smoking days, 37.02 deg. C. (98.64 Fahr.), and 82.6. 4. In persons of all three categories, the mean temperature and pulse on non-smoking days, were 36.73 deg. C. (98.11 Fahr.), and 71.55; on smoking days, 37.02 deg. C. (98.64 Fahr.), and 81.24. Expressing the conclusion between averages for smoking and non-smoking days, in form of geometrical proportions, we have the following figures: *a*, in ordinary persons, for the temperature 1007:1000, and for the pulse 1230:1000; *b*, in delicate persons, 1010:1000 and 1170:1000; *c*, in strong persons, 1006:1000 and 1150:1003; *d*, in persons of all categories, 1008:1000 and 1180:1000. [That is, tobacco-smoking produces a stronger influence on the pulse than on the temperature. The author considers even moderate tobacco-smoking hurtful to healthy systems. Nobody ever denied that tobacco-smoking influenced the temperature and pulse of a smoker; the question is only, whether this—at all events, not very considerable—influence is really harmful to the system.—*Rep.*] V. IDELSON, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. PELLIZZARI, C.—Syphilitic Reinfection of Husband and Wife. (*Lo. Speriment.*, March 1882.)
2. NEUMANN.—The Treatment of Syphilis by Mercury. (*Allgem. Wien. Med. Zeit.*, No. 14, 1882.)
3. AUBERT.—Excision and Intravenous Auto-inoculation of the Syphilitic Chancre. (*Lyon Méd.*, No. 14, 1882.)
4. GALEZOWSKI.—On Hypodermic Injection of Cyanide of Mercury in Syphilitic Disease of the Eye. (*Le Progrès Méd.*, No. 15, 1882.)
5. BLACHEZ.—The Treatment of Syphilitic Disease of the Eye. (*Gaz. Hebdom.*, No. 19, 1882.)
6. NEISSER.—The Micro-organisms of Gonorrhœa. (*Deutsch., Med. Woch.*, No. 20, 1882.)
7. DIDAY.—On the Effect of Injections in the Treatment of Gonorrhœa. (*Lyon Méd.*, No. 22, 1882.)
8. TAYLOR, M. K.—The Abortive Treatment of Buboes and Lymphadenitis generally by Injection of Carbolic Acid. (*Amer. Jour. of the Med. Sci.*, April 1882, p. 359.)
9. STURGIS, F. R.—A Second Infection from Syphilis. (*Ibid.*, p. 378.)
10. GÜNTZ.—The Diagnosis of Syphilitic Disease of the Lung during Life by the Sputa and Hæmoptysis. (*Memorab.*, Heft iv, 1882.)
11. FOURNIER.—On Locomotor Ataxy of Syphilitic Origin. (*Ann. de Derm. et de Syph.*, Nos. 1 and 2, 1882.)
12. SPILLMAN.—On Destruction of the Chancre as an Abortive Measure in Syphilis. (*Ibid.*, No. 3, 1882.)
13. VERNEUIL AND MALÉCOT.—On the Appearance of Syphilitic Lesions at the Site of Previous Injuries. (*Ibid.*, No. 4, 1882.)
14. SCHUSTER.—On Mercurial Soap. (*Viertelj. für Derm. und Syph.*, Heft 1, 1882.)
15. BERGH.—On Gonorrhœal Funiculitis. (*Ibid.*)
16. GÜNTZ.—The Treatment of Syphilis without Mercury: a New Abortive Method. (*Ibid.*)
17. HERMAN.—The Transmission of Syphilis by Inheritance. (*Allgem. Wien. Med. Zeit.*, Nos. 22 and 24, 1882.)
18. TÜNCEL.—The Treatment of Buboes with Iodoform. (*Deutsch. Med. Woch.*, No. 25, 1882.)
19. ATKINSON, I. E.—On Simple Chancres of the Preputial Margin. (*Med. News*, New York, June 3, 1882.)
20. ALTHAUS.—A Case of Cerebro-Spinal Syphilis. (*Lancet*, May 20, 1882.)

21. THIN.—On the Treatment of Chancre by Glycerinum Boracis. (*Ibid.*, May 27, 1882.)
22. BUZZARD.—On the Association of Tabes Dorsalis with Syphilis. (*Ibid.*, June 10, 1882.)
23. LOWNDES.—Syphilis and Marriage. (*Ibid.*, July 8, 1882.)
24. MAURIAC.—On Early Syphilitic Affections of the Subcutaneous Cellular Tissue. (*Annales de Derm. et de Syph.*, 1881, No. 3.)
25. HOWARD, H. G.—Recurrent Gonorrhoea. (*Chicago Med. Rep.*)
26. DIDAY.—Digital Cauterisation of the Pharynx. (*Lyon Méd.*, Aug. 1881.)
27. PETROWSKY.—The Influence of Pyrexial Diseases on the Course of Syphilis. (*Wratsch*, No. 22.)
28. FINGER.—A Constant Nervous Disturbance in Secondary Syphilis. (*Viertelj. für Dermat. und Syphil.*, 1881, Heft 2, 3.)
29. REBATEL.—The Transmission of Venereal Diseases to Animals. (*Lyon Méd.*, Jan. 8, 1882.)

1. *Pellizzari on a Case of Syphilitic Reinfection of Husband and Wife.*—Dr. C. Pellizzari of Florence reports the following case (*Lo Sperimentale*, March 1882). About the middle of December 1880, a healthy-looking married man, about fifty years of age, consulted Dr. Pellizzari for phimosis with discharge from beneath the prepuce and enlarged inguinal glands, which had followed a suspicious intercourse some days before. Induration of the corona subsequently became well marked, and in due course a macular syphilide appeared, having been preceded by osteocopic pains. The man, on being told that he was suffering from syphilis, remarked that he had suffered from venereal sores ten years before, and had also at that time infected his wife who, a few months afterwards, during pregnancy, had suffered from general debility, headache, and moist papules of the genital organs. Her child also showed signs of syphilis soon after its birth. Further and positive evidence of the wife's infection was obtained from Professor P. Pellizzari, who had attended her in 1873 for syphilitic perforation of the septum nasi. On February 2nd, 1881, she was examined by the author, and found to have an indurated sore of the fourchette and enlarged inguinal glands; a month later, a maculo-papular syphilide appeared. The two attacks of syphilis in the case of the wife are thus clearly proved; but, as regards the husband, the evidence of the former attack appears to rest on the fact stated by the man himself, that he had ten years previously contracted venereal sores after suspicious intercourse, and on the proof of subsequent syphilis in the wife and child. The husband appears to have suffered so slightly on that occasion, that he did not think it necessary to obtain medical advice. In connection with this it may be mentioned that, in the later attack, when he was under the author's observation, the general symptoms were mild in degree; while the wife suffered severely from recurrent eruptions, nodes, etc., although she had been almost continuously under treatment during the preceding ten years.

4. *Galezowsky on Cyanide of Mercury in Syphilitic Disease of the Eye.*—M. Galezowski recommends (*Prog. Méd.*, No. 15, 1882) the subcutaneous injection of cyanide of mercury in doses of from 5 to 10 milligrammes, as by far the most efficacious means of treating syphilitic diseases of the eye; particularly the affections of the deeper structures, such as choroiditis and optic neuritis, against which the ordinary preparations of mercury are often of

little avail. A solution, in the proportion of 1 milligramme to the drop, is said not to cause any irritation of the skin.

8. *Taylor on the Abortive Treatment of Buboes by Injections of Carbolic Acid.*—Dr. M. K. Taylor, an American army surgeon, states (*American Jour. of the Med. Sciences*, April 1882, p. 359) that he has treated nearly 150 cases of various forms of lymphadenitis, specific and non-specific, by the injection of carbolic acid, and that, when the case was seen before the formation of pus was well established, he has not failed to arrest the process immediately, and to allay the pain in a few minutes. Dr. Taylor finds it best to wait until the gland has attained a certain size, and until its stroma has become sufficiently distended to allow free permeation of the fluid. The skin over the gland is then frozen, the swelling is firmly held with the fingers, and the solution injected into the centre of the gland. The strength of the solution used varied from 4 to 16 grains of carbolic acid to the ounce, but the most convenient strength was found to be 8 grains to the ounce. Of this, from 20 to 30 minims was injected. The average time Dr. Taylor's patients had to forego their usual avocations did not exceed three or four days, and many did not lie up at all.

10. *Güntz on the Diagnosis of Syphilitic Disease of the Lung by Examination of the Sputa, etc.*—Dr. J. E. Güntz of Dresden, in a paper on the diagnosis of syphilis of the lung (*Memorab.*, Heft 4, 1882), refers to a paper lately published by Cube in Virchow's *Archiv*, containing the particulars of a case of supposed tubercular phthisis, which was afterwards diagnosed to be syphilitic by the detection of gummy material in the sputa, and in which recovery took place. The author also describes a similar case under his own care, in which the diagnosis was confirmed by microscopical examination of the sputa. A man, aged 35, who had contracted syphilis five years before, came under observation with a gumma on the leg, and with signs of consolidation over a small area in the lower lobe of the left lung on its posterior aspect. The patient recovered for a time under injections of bichloride of mercury. A year and a half later, the man strained himself in lifting a heavy weight, and this was followed by hæmoptysis and shortness of breath, without fever or loss of appetite. The previously affected area at the back of the left chest had increased in size, and there were the physical signs of a hæmorrhagic infarct. Dr. Güntz presumed that bleeding had occurred around an old patch of syphilitic deposit in the lung. The patient finally recovered. The material which was coughed up, after being freed from blood by soaking in alcohol, showed under the microscope a mixture of granular detritus, groups of granules, cells, fatty matter, etc., some of the specimens showing the appearances depicted in Lancereaux's work on syphilis. Neither blood-corpuscles, nor vessels, nor lung-tissue were detected. Some of the preparations were sent to M. Lancereaux, who informed the author that he found small round cells coloured by carmine, such as are found in gummy formations, and that he, therefore, agreed with Dr. Güntz as to the syphilitic nature of the change. The author concludes with the remark that this is only the second case on record, in which the existence of syphilitic disease of the lung has been proved during life by the coughing up of gummy fragments and their detection in the sputa.

11. *Fournier on Locomotor Ataxy of Syphilitic Origin.*—In a paper on the relation of syphilis to

tabes (*Ann. de Derm. et de Syph.*, Nos. 1 and 2, 1882), M. Fournier sums up his views on the subject as follows. 1. The existence of tabes of syphilitic origin is incontestable. 2. In the great majority of cases of tabes, syphilis is the cause of the disease. These views are based on the following considerations.

a. The striking frequency of syphilitic antecedents in those who suffer from tabes. *b.* The almost exclusive development of tabes in the tertiary period of syphilis. For example, of 85 cases of tabes in syphilitic persons, the author found that the spinal affection began later than the fourth year after contagion in 81. *c.* The frequent association of tabetic symptoms with others which are particularly common in syphilis; for instance, paralysis of cranial nerves, hemiplegia, apoplectic seizures, epileptiform attacks, aphasia, various intellectual disturbances, the complex symptoms known under the name of 'general pseudo-paralysis', and the frequent connection of tabes with progressive general paralysis. *d.* The influence of specific treatment. *e.* The co-existence of undoubted syphilitic manifestations on other parts of the body. *f.* The frequent impossibility of discovering any other cause than syphilis in cases of tabes.

13. *Verneuil and Malécot on the Appearance of Syphilitic Affections at the Site of Old Injuries.*—Two cases, showing the liability of syphilis to attack parts that, through previous injury, have become points of 'least resistance', are reported by M. Malécot (*Annales de Derm. et de Syph.*, April 1882) from the practice of M. Verneuil. In the first case, a man, who had been healthy during childhood, received, at the age of 14, a violent blow on the right tibia, which caused periostitis and necrosis. The wound finally healed two years afterwards, and the man remained quite well until he was 25 years of age, when (December 1881) he came under M. Verneuil's care at La Pitié Hospital, stating that the old wound had reopened about two months before, without any injury or other cause, so far as he could judge. On examination, an ulcer was found at the site of the old scar. The sore was not like that which is seen with simple osteitis, but had sharply cut edges, a coppery base, and secreted a sanious pus. There was also a smaller ulcer below the first, but with similar characters. Neither sore was painful. On further examination, the man was found to have an indurated cicatrix on the penis, enlarged glands, and a mucous patch in the throat. Under the administration of mercury, the ulcers healed rapidly. In the second case, a man, who had had his left elbow fractured when three years old, at the age of 20 contracted syphilis. At the beginning of the secondary stage of the disease, the elbow, without any injury having occurred, became painful and swollen. The result of specific treatment in this case was not known, as the patient left the hospital a few days afterwards. A third case is reported of a previously healthy man, aged 23, who, during the secondary period of syphilis, had a fall and bruised his right hip. A scab formed over the great trochanter, and, when it fell off, left a deep ulcer, with a greyish surface and perpendicular, pigmented, and indurated edges. This last case is brought forward to show that, in a person already under the influence of syphilis, an ordinary injury may produce a lesion having all the characters of a syphilitic ulcer.

14. *Schuster on the Use of Mercurial Soap.*—Dr. Schuster of Aix-la-Chapelle describes (*Viertelj. für Derm. und Syphilis*, Heft 1, 1882) a French prepara-

tion of mercury in the form of a soap (1 in 5), which he saw in use among Charcot's patients in the Salpêtrière Hospital in Paris. The soap forms a lather in the ordinary way with warm water, and may be used in all cases in which inunction is indicated. From a limited experience of its use, Dr. Schuster considers it equal in value to mercurial ointment, while it is a cleaner preparation, and, being of the consistency of ordinary soap, is more convenient for travellers to carry about. The skin is more easily cleansed from the soap than from blue ointment; and the author also considers it may be useful in cases where the introduction of mercury, without the knowledge of the patient, is desired.

15. *Bergh on Gonorrhæal Funiculitis.*—With regard to the relative frequency of epididymitis in gonorrhœa, Bergh remarks (*Hospitals Tidende*, 1881, and *Viertelj. für Derm. und Syph.*, Heft 1, 1882) that, according to his experience, 7.3 per cent. of cases of urethritis are thus complicated. The inflammation extends along the ejaculatory ducts, and its occurrence greatly depends, the author thinks, on the state of these ducts; that is to say, if their channel is narrow, the urethral secretion is less likely to gain an entrance than when the lumen is wide. In two cases, the author states that he has been able, by examination *per rectum*, to ascertain the presence of commencing funiculitis, in one case four, and in the other three days before anything abnormal could be felt by external examination.

16. *Güntz on the Treatment of Syphilis without Mercury.*—This method of treatment, called 'abortive' by Dr. Güntz, forms the subject of a work, *Die Syphilisbehandlung Ohne Quecksilber*, of which a notice appears in the *Viertelj. für Derm. und Syph.*, Heft 1, 1882. The treatment consists in the administration of bichromate of potash; and this drug the author has used in 194 cases of chancre during a period of fifteen months. Of these, 109 are rejected for various reasons to avoid error, 85 being thus left, on the results of which the present work is grounded. In 71 of these cases, the primary sore was not cauterised, and in 37 no signs of syphilis followed. In the remaining 14, cauterisation of the sore was resorted to, as well as the administration of the bichromate, and of these only 2 developed signs of general syphilis. [The value of the observations, however, appears to be almost *nil*, owing to defective reporting, it being by no means clear that in many cases the sore was not simply a local chancre. The drug employed, moreover, from its irritating nature, is borne only with difficulty by many patients; and there seems to be no proof at present that a valuable remedy for syphilis has been discovered in bichromate of potash.—*Rep.*]

24. *Mauriac on Early Syphilitic Affections of the Subcutaneous Cellular Tissue.*—The following is a résumé of the conclusions at which M. Mauriac has arrived, after a very full consideration of this subject, in a series of papers published in the *Annales de Derm. et de Syph.*, July 1880 to July 1881. 1. Syphilitic lesions may occur in the subcutaneous connective tissue, as well as in many other tissues and organs of the body, very soon after the initial lesion and during the most active stage of the virulent period. 2. At the beginning of syphilis, as well as during the tertiary stage, the morbid products which develop in the subcutaneous connective tissue consist of new growths, which take the form of tumours or effusions. 3. As a rule, the early subcutaneous gummy affections may be divided into three classes. The first consists of a form which, according to the

author, had not hitherto been described, and which he calls syphilitic erythema nodosum. It is characterised by the simultaneous generalisation in an eruptive form of neoplasms on various parts of the body, but especially on the lower, and less frequently on the upper, extremities. The eruption is often preceded and accompanied by febrile phenomena, and rheumatic or neuralgic pains in the parts about to become the seat of the affection. Among these neoplasms, which are almost as much in the skin itself as beneath it, there are patches of true erythema nodosum, subcutaneous swellings, extensive effusions of phlegmonous appearance, etc. But resolution is the rule. Whatever may be the form, extent, or intimate relation of the neoplasm to the skin, or the acuteness of the symptoms, the growth does not break down. 4. In a second series of cases, tumours or infiltrations appear in a more isolated form without any eruptive tendency. They are insidious in their onset, and are always indolent and aphlegmatic. They tend to disappear spontaneously, and are usually of very short duration. Sometimes they soften and form subcutaneous fluid collections, but absorption takes place without suppuration or ulceration. 5. In a third class of cases the neoplasms, which are usually exclusively hypodermic during their early stage, quickly suppurate. The rapidity of their course is their most characteristic feature. The overlying skin is always invaded, and ulcers are produced which often bear a great resemblance to those of ecthyma. From their course, duration, and the gravity of the lesions which they produce, these gummata may be divided into two varieties. The first, or benign variety, is most common; it may get well spontaneously in a month or two months, and much more quickly if iodide of potassium be given. The second, or malignant variety, differs only by its precocity from the worst kind of gummata of the tertiary period. It is very rare. The morbid process develops slowly, but has no tendency to resolution. The gummata suppurate, ulcerate, destroy the tissues widely and deeply, and are often uninfluenced by iodide of potassium. 6. The time of appearance of the early subcutaneous syphilitic formations is, as a rule, as follows: *a.* For the syphilitic erythema nodosum, the fourth month after the appearance of the chancre; *b.* For the circumscribed subcutaneous and cutaneous swellings which tend to resolution, the fifth month after the appearance of the chancre; *c.* For the ulcerating subcutaneous neoplasms, the ninth month after the appearance of the initial lesion. In the cases observed by the author, the shortest interval was two months, and the longest fifteen months. Accompanying the early affections of the subcutaneous cellular tissue, are also observed the ordinary superficial lesions of the skin and mucous membranes, which usually appear during the most active period of the disease.

ARTHUR COOPER.

25. *Howard on Recurrent Gonorrhoea.*—Dr. H. C. Howard of Champagne, Illinois (*Chicago Med. Rev.*), has recently had a series of cases in which gonorrhoea had been communicated by the husband to the wife, and cured in both, but repeatedly returned in the case of the husband, although he had not been improperly exposed. Careful examination of the female showed that the disease had persisted in the little glands of the female urethra, first described by Dr. A. J. C. Skene of Brooklyn (*American Jour. of Obstetrics*, April 1880), and fully noticed editorially in the *Chicago Med. Gaz.*, May 5, 1880. Dr. Howard, believing that these little glands were continuing to

pour out true gonorrhoeal pus, although the patient presented no other evidence of the disease, and that this pus had produced recurrent gonorrhoea in the male, directed his treatment to them, which consisted in the application of carbolic acid crystals. In each case the discharge disappeared permanently under this treatment; and the disease in the male now having been cured, did not return. Dr. Skene, in his original paper, expresses the opinion that, in the cases which he had observed, the inflammation was caused by gonorrhoea; which persisted in the glands long after the original trace of the disease had disappeared. Dr. Howard seems to have been the first to note this condition as a cause of gonorrhoea recurring as often as cured in the male. His observation is important, as showing that the female may communicate the disease long after it would previously have been pronounced cured.

26. *Diday on Digital Cauterisation of the Pharynx.*—Dr. Diday (*Lyon Méd.*, August 1881) proposes digital cauterisation in syphilitic affections of the pharynx. The following is his method. A large-mouthed bottle being filled with acid nitrate of mercury, the tip of the first finger is dipped into the caustic fluid in such a way that only the extreme pulp of the finger is moistened, and no drops are allowed to fall or run down. The patient being seated, prepared, and forewarned, the finger, with the palmar surface downwards, is carried across the mouth. The anterior pillars being passed, the whole of the tonsils are swept by the sensitive *porte-caustique* without effort to the operator, and without any appreciable suffering to the patient. The extreme inferior limit of the pharynx may thus be reached, which, in the ordinary *porte-caustique*, can only be very imperfectly and occasionally touched. The diseased parts may be retouched again and again. These are M. Diday's conclusions. 1. Syphilitic lesions of the mouth and pharynx do not become cured without local treatment and cauterisation. 2. As during cauterisation, as hitherto practised, it has been necessary to keep the tongue lowered during the whole process, the proceeding has been very difficult and painful, and hence it runs the risk of being always incompletely done, or of not being repeated as often as necessary. 3. When practised with the finger, according to the rules and conditions specified above, cauterisation of the pharynx becomes both easy and certain in its action.

27. *Petrowsky on the Influence of Pyrexial Diseases on the Course of Syphilis.*—This writer considers that sufficient emphasis is not laid in textbooks on the fact that an intercurrent fever may cure syphilis. Of this he adduces three cases (*Wratsch*, No. 22.) One of these seems quite beside the point, the only sign of syphilis remaining being an enlarged submaxillary gland, which disappeared in the course of an attack of typhoid fever. The others were well-marked cases of syphilis, of six and twelve months' standing, which, apparently, completely recovered after an attack of small-pox and an attack of facial erysipelas. In the first case, a one-and-a-half months' course of mercury was the only treatment, in the other there was no specific treatment. Both cases have remained free from symptoms for several years.

28. *Finger on a Constant Nervous Disturbance in Secondary Syphilis.*—Dr. Finger, as assistant in the clinic of Professor Zeissl in Vienna, has had an opportunity of examining the reflex irritability in fifty cases of recent syphilis (*Viertelj. für Dermat.*

und Syphil., 1881, Heft 2, 3). In all cases there was a typical oscillation of this irritability. Immediately before and at the time of the eruption, there was an increase, sometimes very considerable, of the superficial and deep reflexes. This was followed by a fall, often deeper under the normal, after which the irritability slowly returned to the normal, generally several weeks after the disappearance of the eruption. Dr. Finger is unable to decide whether this oscillation is due to local changes, or if it depends on early meningial irritation.

JAMES ANDERSON, M.D.

29. *Rebatel on the Transmission of Venereal Diseases to Animals*.—Dr. Rebatel (*Lyon Méd.*, Jan. 8th, 1882) has performed a number of experiments, with the object of determining again the possibility of infecting the lower animals with either of the specific venereal poisons. He found that gonorrhœal pus caused no inflammation in any mucous surface, eye, urethra, or glands of dogs or rabbits. The pus from simple chancres and from hard chancres was equally inert.

ROBERT SAUNDBY, M.D.

DERMATOLOGY.

RECENT PAPERS.

1. SIMON, OSCAR. — On Balano-Posthymycosis. (*Trans. of the Intern. Med. Congress*, 1881.)

2. RASORI, H.—A Case of Diffuse Hydrosadenitis caused by the Administration of Pilocarpine. (*Ibid.*)

3. UNNA, P. G.—On the Cure of Lichen Ruber without Arsenic. (*Monatshefte für Prakt. Derm.*, No. 1, 1882.)

4. UNNA, P. G.—Plaisters Spread on Muslin, with Gutta-Percha for a Basis (Gutta-percha Pflastermulle). (*Ibid.*)

5. LELOIR.—Clinical and Anatomic-Pathological Researches on the Affections of the Skin, having a Nerve-Origin. (Paris, 1882.)

6. THIN, G.—On Trichophyton Tonsurans (the Fungus of Ringworm). (*Proceedings of the Royal Soc.*, No. 217, 1881.)

7. THIN, G.—Bacterium Decalvans. (*Ibid.*)

8. MICHELSON.—On Malignant Forms of Alopecia Pityrodes and Alopecia Areata. (*Monatshefte für Prakt. Derm.*, No. 4, 1882.)

9. UNNA.—A Specific Action of Salicylic Acid on the Epidermis. (*Ibid.*)

10. NAPIER.—Treatment of Psoriasis by Internal Administration of Chrysophanic Acid. (*Glasgow Med. Jour.*, June 1882.)

11. SMITH, WALTER G.—A Case of Tinea Versicolor in a Child. (*Arch. of Derm.*, No. 1, 1882.)

12. BESNIER.—On the Treatment of Lupus. (*Bull. Gén. de Thérap.*, 1881, No. 1, p. 1. See *Arch. of Derm.*, No. 1, 1882.)

13. SCHÜLLER, MAX.—On the Micrococci of Lupus. (*Centralb. für Chir.*, No. 46, p. 1. Abstract in the *Arch. of Derm.*, No. 1, 1882.)

14. UNNA.—Contributions to the Pathology of the Nails. (*Viertelj. für Derm. und Syphil.*, 1882, Heft 1.)

15. RAUDNITZ.—The Etiology of Lupus Vulgaris. (*Ibid.*)

16. BOECK.—Case of Multiple Cacheectic Gangrene of the Skin. (*Norsk Mag. for Lægevidensk.*, Heft 10, 1881; *Ibid.*)

17. On Pityriasis Rosea (Gibert), Maculata et Circinata (Bazin). (*Berl. Klin. Woch.*, No. 38, 1881.)

18. JAMIESON, ALLAN.—Pityriasis Maculata et Circinata. (*Brit. Med. Jour.*, June 3, 1882.)

19. VIDAL.—On Pityriasis Circinata et Maculata. (*Ann. de Derm. et de Syphil.*, vol. iii, No. 1.)

20. GIBIER.—The Bacterium of Pemphigus. (*Ann. de Derm. et de Syphil.*, vol. iii, No. 2.)

21. BESNIER.—Case of Anthracoid Eruption due to Iodide of Potassium. (*Ibid.*, vol. iii, No. 3.)

22. VON HEBRA.—An Undescribed Fungus-Disease of the Skin. (*Wiener Mediz. Blätter*, Nos. 39 and 40, 1881.)

23. LANGER.—Sclerema Neonatorum. (*Wien. Med. Presse*, Nos. 44 and 45, 1881.)

24. NIELLY.—A Case in which an Undescribed Parasite was found in the Skin. (*Gaz. Méd. de Paris*, April 15, 1882.)

25. MACPHEDRAN.—Leprosy in Cape Breton. (*Canadian Jour. of Mental Science*, Jan. 1882.)

26. LASSAR.—On Treatment of Eczema. (*Ann. de Derm.*, Sept. 1881.)

27. DELPECH.—The Treatment of Keloid. (*Thèse de Paris*, 1881.)

28. BARUCH.—Erythema Æstivum (Hay Erythema). (*Berl. Klin. Woch.*, No. 50, 1881.)

29. RECKLINGHAUSEN.—Multiple Fibroma of the Skin in Relation to Multiple Neuroma. (*Centralbl. für die Med. Wiss.*, 1882, No. 22.)

30. SQUIRE, B., AND OTHERS.—The Treatment of Eczema by Bantingism. (*Brit. Med. Jour.*, pp. 497, 695, 1882.)

31. SCHÜLLER.—The Micrococci of Lupus. (*Centralbl. für die Med. Wiss.*, 1882, No. 16.)

1. *Simon on Balano-Posthymycosis*.—The late Professor Oscar Simon (*Trans. of the Intern. Med. Congress*, 1881; *Diseases of the Skin*) has described a form of inflammation of the preputial sac in diabetic patients, due to the development of a fungus. After erythema of the glands and prepuce, there are puriform secretion and superficial erosions. Phimosis may supervene, and papillary growths may form. The fungus evidently finds its pabulum in the diabetic urine. The spores vary in size, averaging from 0.002 millimètre to 0.004 millimètre. The mycelium varies from 0.0015 millimètre to 0.0045 millimètre in diameter. Sporangiums, or organs of fructification, were not found. The treatment consists in the application of antiseptics.

2. *Rasari on Diffuse Hydrosadenitis caused by Pilocarpine*.—In the case of a girl (*Trans. Intern. Med. Congress*, 1881), aged 12, pilocarpine being administered for pruritus caused over the whole body, except the soles of the feet, an eruption consisting of small movable nodules in the subcutaneous tissue. They gradually approached the surface, when a red point was observed in the centre. In the axilla, they became as large as a cherry. A small quantity of pus escaped, and the little abscess then cicatrised, leaving an induration which only disappeared after some months. Inflammation of the sweat-glands, due to pilocarpine, was diagnosed.

3. *Unna on the Cure of Lichen Ruber without Arsenic*.—Unna (*Monatsb. für Prakt. Derm.*, No. 1, 1882) has succeeded in curing six cases of lichen ruber by an ointment containing perchloride of mercury and carboic acid, without the internal administration of arsenic. His formula is: Ung. zinci benzoati, 500 grammes; acidi carbolici, 20.0 grammes (4 per cent.); hydrargyri perchloridi, 0.5 to 1 gramme. Carboic acid appeared in the urine on the second, and there was slight transitory depression on the third or fourth day of the treatment. The duration of the treatment was in proportion to the time the disease had lasted. Unna recommends this treatment in all severe cases of lichen ruber (acuminatus), which are attended with much itching and depression, as being the speediest means of procuring alleviation and cure.

4. *Unna on Gutta-Percha Plaisters.*—Unna (*Ibid.*) recommends plaisters with gutta-percha for a basis, as being specially useful in the application of mercury, iodine, or arsenic to the skin.

5. *Leloir on Affections of the Skin having a Nerve-Origin.*—The author, in a work with the above title, published by Delahaye and Lecrosnier, attempts to show that in certain skin affections the peripheral nerve-fibres leading to the diseased areas are found diseased. The diseases specified are vitiligo, ichthyosis, ecthyma, and pemphigus.

6. *Thin on Trichophyton Tonsurans.*—The reporter has communicated to the Royal Society (*Proc. Roy. Soc.*, 217, 1881) the results of a series of investigations on this parasite. The conclusion at which he arrives is that trichophyton tonsurans is a special fungus, distinct from penicillium glaucum and other common fungi. The only fluids in which he succeeded in getting it to grow are aqueous and vitreous humour; and with these fluids he succeeded only when the hairs were moistened (not immersed) on the under surface of the cover-glasses of cells, or floated on the surface of the fluid in test-glasses. If these conditions of moisture should prove to be requisite for its growth, they afford an explanation of the effects of inflammation in curing ringworm, and of its attacking the heads of children, whilst it generally spares those of adults.

7. *Thin on Bacterium Decalvans.*—The reporter (*Ibid.*), whilst unable to find in this disease the fungus described by Gruby and some other authors, describes a bacterium which he found in six cases specially studied with a view to its demonstration. Antiparasitic treatment had been successful in his hands. [The reporter, since the paper referred to was written, has found corroborative evidence of his views, both by direct observation and in the results of treatment. This corroborative evidence will be published.—*Rep.*]

8. *Michelson on Malignant Alopecia Pityrodes.*—Michelson (abstract in *Monats. für Prakt. Derm.*, No. 4, 1882) describes a form of alopecia ending in universal baldness, which can be distinguished from severe cases of alopecia areata, which have a similar result. In alopecia pityrodes, the outlines of the bald patches are less marked, and there are changes in the outer root-sheath, which he believes to be special. The cells of this sheath are so flattened and arranged in concentric wavy layers, that at first sight it appears as if the connective tissue sheath of the follicle had been detached. After the hair has been soaked in glycerine for several days, it is seen that the layers are composed of epithelial cells which have undergone a process of morbid horny change. [The reporter had recently an opportunity of watching a case which resembled in its main features those described by Michelson as instances of alopecia pityrodes, and made a searching examination of the hairs. Although the case differed in its course from ordinary cases of alopecia areata, he came to the conclusion that it was only an unusual form of this disease. It ended in total baldness.—*Rep.*]

9. *Unna on Salicylic Acid.*—Dr. Unna (*Ibid.*) describes a special action of salicylic acid on horny epithelium. In this acid, he remarks, we have an agent by which we can painlessly and with certainty remove the thickened horny layer, either in physiological or in pathological conditions, in any extent, in one piece, as a whitish discoloured membrane. The acid is employed as salicylic collodion, or as a 10 per cent. ointment, or is made into a plaister with gutta-percha. It is most convenient to use it in

the form of a 'gutta-percha salicyl plaster-mull', (plaster mull—a plaster spread on muslin). [The reporter can testify to the remarkable action of this plaister. It is prepared by Herr Beiersdorf in Hamburg, who states that it can be had in London from Messrs. Allen and Hanburys, and Savory and Moore.—*Rep.*]

10. *Napier on the Treatment of Psoriasis by Internal Administration of Chrysophanic Acid.*—Dr. Napier (*Glasgow Med. Jour.*, June 1882) describes two cases, in which chrysophanic acid had been given internally for psoriasis. In one case, the disease disappeared under its use. In the other, that of a brother of the former patient, considerable improvement had taken place. Dr. Napier thinks half a grain would be a good medium dose to start with in an adult. It should be gradually increased as the stomach will bear it. When intolerance is once established, small doses should again be resorted to. The acid seems to be best borne in powder, combined with sugar of milk, and taken after food.

11. *Smith on a Case of Tinea Versicolor in a Child.*—This very rare example, described by Dr. Walter Smith (*Arch. of Derm.*, No. 1, 1882), of tinea versicolor affecting a child, occurred in a girl, aged 12. The disease was widely spread over the chest, and was plainly visible on the back. It could not be ascertained when the disease began, but the girl was positive that it had existed for a long time.

12. *Besnier on the Treatment of Lupus.*—Besnier (abstract from *Bull. Gén. de Thérap.*, 1881, No. 1, 1881; in *Arch. of Derm.*, No. 1882), after pointing out the importance, in the treatment of lupus by scarification, of keeping the cutting edge of the scarificator used at right angles to the surface of the skin, remarks that, the nearer together and the more regular the scarifications, the greater are the chances of a rapid success. The depth to which the instrument should penetrate is measured by the resistance offered, which is feeble in the diseased, and more appreciable in the sound tissue. As a rule, the scarifications are healed in about eight days, and may then be removed. In old cases renewal of the treatment from time to time in after years is necessary. It is especially in lupus vorax of the face that the treatment should be made early, and conducted with vigour. This method of treatment, applied to lupus erythematosus of the face, gives about as many failures as successes.

13. *Schüller on the Micrococci of Lupus.*—The author (*Centralb. für Chirurg.*, No. 46, p. 1; abstract in the *Arch. of Derm.*, No. 1, 1882) states that the portions of lupus-tissue in which micrococci are most easy of detection are the small young nodules, which, embedded in the connective tissue, underlie and surround the larger and older centres of the disease. Micrococci were observed between the cells, and surrounding the individual groups of cells. From various points in the periphery of a group of cells, rows of micrococci ran out into the adjacent connective tissue, sometimes reaching as far as the next group of cells. As a rule they were not crowded together, but were rather loosely distributed. Within the limits of the diseased tissue they were found also in the enlarged sebaceous glands, in the sheaths of the hairs, around the coils of the sweat-glands, and occasionally in the walls of the smaller blood-vessels.

14. *Unna on the Pathology of the Nails.*—Unna describes cases (*Viertelj. für Derm. und Syphil.*, 1882, Heft 1) in which the nails were diseased in a manner to which attention has not been previously

directed. The disease occurs in defined patches in the matrix, especially in its median parts, in the form of elongated prominences, above which the nail substance is at first raised in ridges. The nail-substance remains in the first instance intact, but after a time undergoes gradually a partial atrophy, and the swellings are laid bare. The development is exceedingly chronic, and occurs on a base which is the seat of venous congestion. In certain conditions, the affection is subject to spontaneous amelioration and cure; but it is little affected by local treatment. It is occasionally associated with the symptoms of deeper seated venous congestion of the whole finger-tips.

15. *Raudnitz on the Etiology of Lupus Vulgaris.*—Raudnitz analysed (*Ibid.*) 209 cases of lupus, observed at the clinique of Professor Pick in Prague. He concludes that neither anatomically nor clinically can a distinction be made between a scrofulous and an idiopathic lupus; that lupus assumes the same form, whether it attacks healthy individuals or persons who had previously shown evidences of scrofula; that an inherited tendency to tuberculosis could only be ascertained in 10 to 15 per cent of the cases; that the glandular abscesses, common in scrofula, are very rare in lupus; that a simultaneous development of lupus in blood-relations is scarcely ever seen; and that its transmission from parent to child probably never occurs. In 30 per cent. of the cases, lupus had developed on or near scrofulous cicatrices; and, in twelve cases, the exciting cause was said to be an injury.

16. *Boeck on Multiple Cachectic Gangrene of the Skin.*—Boeck (*Norsk Mag. for Lægevid.*, Heft 10, 1881; abstract in *Viertelj. für Derm. und Syphil.*, 1882, Heft 1) describes a case of the affection to which Oscar Simon gave this name in 1878. The patient was a well nourished female child, 10 months old, and was the subject of an eruption, which appeared on the back, breast, scalp, and flexor surfaces of the arms. The development of the eruption took place as follows. There was, first, a red, somewhat raised, spot, on which a white shallow vesicle quickly appeared. The vesicle terminated in loss of substance in the cutis, which was the seat of a localised circumscribed gangrene. On the scalp, the gangrene affected the periosteum. The largest scars were observed on the scalp, some of them being 1 to 2 centimètres wide. As the older affected parts healed, new spots developed on the other parts. [The description of the case recalls appearances observed in the gangrenous forms of varicella, such as those shown in some of the models in the museum of Guy's Hospital.—*Rep.*]

17. *Behrend on Pityriasis Rosea (Gibert).*—Dr. Behrend describes five cases of the affection described in 1860 under this name by Gibert; the essential features of the disease being small spots, from the size of a pin's head to that of a bean, of a bright red colour, slightly raised and desquamating. No fungus was found. Behrend proposes the name *roseola furfuracea herpetiformis*. [Auspitz, in a note appended to the abstract of Behrend's paper in the *Arch. für Derm. und Syphil.*, 1 Hft, 1882, recommends, in order to avoid confusion in regard to this affection, that the attention of observers should be directed to an Essay by Horand, published in 1867, entitled *Note pour servir à l'histoire du Pityriasis circiné*; and to the description by Hardy under the name 'pityriasis circiné'.—*Rep.*]

18. *Jamieson on Pityriasis Maculata et Circinata.*—Dr. Allan Jamieson (*Brit. Med. Jour.*, June 3rd, 1882) describes two cases of the disease referred to

above (17) by Behrend. He remarks that Wilson has 'most accurately figured, and correctly described the disease in his *Atlas of Portraits of Diseases of the Skin*, under the name *lichen annulatus serpiginosus*'. Dr. Jamieson found no fungus in either of his cases, but states that the disease yielded easily to antiparasitic treatment.

19. *Vidal on Pityriasis Circinata et Marginata.*—Vidal, who draws a distinction between this disease (*Ann. de Derm. et de Syphil.*, vol. iii, No. 1) and the pityriasis rosea of Gibert and Bazin, affirms that it is caused by a fungus discovered by him, and first shown to the Société de Biologie in July 1879. The principal characters of the mycderm are the extreme smallness of the spores (which has led him to give it the name *Microsporon anomalon* or *dispar*), its arrangement in circles around the epithelial cells, the rarity of chains of spores, and the absence of mycelium. Though presenting the same appearances on the skin, the author states that pityriasis circinata is distinguished from pityriasis rosea by its want of symmetry, and its irregular course. It may continue several months, while pityriasis rosea does not last longer than two months. It is easily cured by parasitocides; a few sulphur baths, and washing with tar-soap, being sufficient to effect a cure.

20. *Gibier on the Bacterium of Pemphigus.*—Gibier states that (*Ann. de Derm. et de Syphil.*, vol. iii, No. 2) the micro-organism of acute pemphigus is a bacterium found in an early stage of development round granules, and, when more developed, as jointed and beaded filaments. It is found in the contents of freshly developed bullæ, and in the urine of patients.

21. *Besnier on a Case of Anthracoid Eruption due to Iodide of Potassium.*—Besnier (*Ann. de Derm. et de Syphil.*, vol. iii, No. 3) reports two cases of severe eruption from iodide of potassium, in one of which it assumed an anthracoid form. A man, aged 40, under treatment for psoriasis palmaris, took 30 grains daily. At the end of a week he presented himself with the face and upper part of the thorax covered with veritable tumours, varying in size from that of a pea to that of a kidney-bean, coppery-red in colour, soft (almost fungoid), and presenting punctated depressions like anthracoid furuncle. Nothing could be squeezed out of these depressions by simple pressure. The swellings were hot and painful, but did not disturb the general health. The iodide was stopped, when the eruption ceased to develop, and, at the end of two weeks, the skin had acquired its normal condition.

22. *Von Hebra on an Undescribed Fungus-Disease of the Skin.*—Von Hebra (*Wiener Med. Blätter*, No. 39 and 40, 1881) describes a form of dermatomycosis which has hitherto escaped observation. It is distinguished by its localisation, being found always symmetrically situated on the neck, bend of the elbows, and in the popliteal spaces. The fungus is small, seldom rod-shaped, and no organs of fructification have been observed. The affection is distinguished from herpes tonsurans by its not occurring in rings, by the hairs remaining unaffected, by its chronicity, and by the amount of artificial eczema which it provokes. It is most likely to be confounded with eczema. It was chiefly observed in young anæmic girls with a transparent skin. The treatment consists in, first, mitigating the eczematous inflammation by diachylon ointment, and then applying antiparasitic remedies.

23. *Langer on Sclerema Neonatorum.*—Langer explains (*Wien. Med. Presse*, Nos. 44 and 45, 1881) the sclerema of infants by the influence of tempera-

ture. The fat of the panniculus adiposus of young children differs from that of adults, in that it is scarcely fluid at the ordinary temperature of the body, and becomes quite solid if there is a slight fall in temperature.

24. *Nielly on an Unknown Parasite in the Skin.*—Nielly communicated to the Academy of Medicine (*Gaz. Méd. de Paris*, April 15, 1882) a case in which a young Breton, who had never been out of France, was covered over nearly the greater part of his body with papules which itched considerably. The seropurulent contents of the papules contained minute eel-shaped animalcules, measuring 0.333 millimètre long, and 0.013 millimètre broad. M. Davaine thought they might be filaria embryos.

G. THIN, M.D.

25. *Macphedran on Leprosy in Cape Breton.*—Dr. A. Macphedran (*Canadian Journ. of Ment. Science*, Jan. 1882, p. 15) publishes brief notes of nine cases of leprosy occurring among the Highland Scotch farmers living in the Lake Ainslie district, where apparently this disease has appeared spontaneously.

ROBERT SAUNDBY, M.D.

26. *Lassar on the Treatment of Eczema.*—Dr. Lassar (*Ann. de Derm.*, Sept. 1881) attaches great importance to the use of antiseptic substances in the treatment of eczema. He remarks that Hebra and his pupils very expressly recommended the expectant treatment of eczema so long as it was acute, the parts being covered with inactive powders, and water or ice being applied only in cases where itching and tension became insupportable. M. Lassar says that these applications are as a rule very badly tolerated, and, therefore, should not be used in acute eczema. On the other hand, patients generally bear very well from the first the application of antiseptic oils to the inflamed parts. Whilst water increases the tension and the swelling of the skin, it becomes rapidly supplé under the influence of the oil, which it readily absorbs, and the adherent crusts, the clots, and epithelial masses are seen to become detached. If one or two per cent. of carbolic acid be mixed with the oil, the result is a diminution of the itching, and the cessation of that scratching which patients can only resist with great difficulty, even when they have a remedy for the itching at their disposal. This special action of the carbolic acid must be attributed to its antiseptic properties. The inflamed parts having been cleansed with the oil, and moistened freely (the skin absorbs considerable quantities), a circular bandage made with muslin steeped in the oil is applied, and is then completely covered with linen. The carbolic acid is sometimes only tolerated during a limited time, because it may also induce eczema. It must then be replaced by salicylic acid (one to two per cent.) or by thymol. The oil of thymol is especially efficacious in pemphigus, properly so called, and erysipelas. It is also employed in burns. Dressing with an antiseptic oil in acute eczema constitutes a very useful method of treatment, preventing extension of inflammatory symptoms. As olive-oil is rather expensive, turnip-oil, which is completely inert, may be used; but glycerines of oleic acid which has a drying action, such as linseed-oil, must not be used, because they themselves induce inflammation by contact with the air. Dr. Lassar also points out the favourable action of salicylic ointment in chronic eczema, especially in the eczema of children, and in eczema of the face. In the latter case, he recommends an ointment of salicylic acid, 2 grammes; oxide of zinc and starch, each 25 grammes; and vaseline, 50 grammes. This

adheres closely to the skin, and cannot be wiped off during sleep.

27. *Delpech on the Treatment of Keloid.*—Dr. Delpech (*Thèse de Paris*, 1881) remarks that the treatment of keloid varies very much. Applications of the fresh pulp of narcotic plants, subcutaneous injections of morphia and sulphate of quinine when the pain supervened at periodical intervals, have been recommended. Hebra and Kaposi have obtained good results from the use of the following preparation; mercurial plaister and plaister of trifolium melilotis, each 15 grammes, to be spread on linen, sprinkled with 12.20 grammes of pure opium, and applied on the affected part. These, however, are only palliative methods. As to curative measures, there have been successively utilised, but without success, mineral douches and discutient solvent ointment and plaisters. Two of the therapeutic agents have, however, given good results; mercury with friction, or under the form of mercurial plaister, and iodine in the shape of external painting, or iodide of potassium for both internal and external use. Surgical treatment is the only resource in the majority of cases. Ablation is the most ordinary method, provided that the keloids are not multiple. Scarifications seem likely to yield better results.

28. *Baruch on Erythema Æstivum (Hay Erythema).*—Under this name the writer (*Berl. Klin. Wochenschr.*, No. 50, 1881) describes a skin disease specially seen in men who mow in meadows with their legs bare. The affection is characterised by a redness and œdematous swelling of the back of the foot and of the leg, followed by the formation of vesicles, with severe itching and burning. These vesicles, with clear yellow contents, become confluent, sometimes burst, and leave round or oval shallow depressions. It is accompanied by slight fever and disturbance of digestion, with sleeplessness from the irritation. The disease occurs in June and July, and is apparently caused by the action of the juice of ranunculus acris. It is distinguished from erysipelas by its appearing on both extremities, without rigor, high fever, or severe affection of digestion. The treatment recommended is the application of compresses wetted with carbolic lotion in the horizontal posture.

29. *Recklinghausen on Multiple Fibroma of the Skin in Relation to Multiple Neuroma.*—The writer publishes a carefully examined case of multiple fibromata of the skin, in which there were numerous neuromata on the cutaneous nerves, the trunks and branches of the nerves of the extremities, the sacral plexus, the vagi, and the abdominal sympathetic (*Centralbl. für die Med. Wiss.*, 1882, No. 22). Microscopic examination of the neuromata showed the nerve passing almost unaltered through the middle of the tumour, without the slightest trace of the formation of nerve-tissue. The fibromata were evidently developed in the deeper layers of the skin, and more especially in the connective tissue coats of the vessels and nerves ramifying in the skin. The writer identifies the fibroma with the false neuroma. Two similar cases are recorded. It is admitted at the same time that the axial bundle of nerve-fibres cannot always be observed in the fibroma.

JAMES ANDERSON, M.D.

30. *Squire and others on the Treatment of Eczema by Bantingism.*—Mr. Balmanno Squire, in the *Brit. Med. Jour.*, April 1882, p. 499, testifies to the value of a meat diet, after the celebrated plan of Mr. Banting, in the treatment of eczema. Mr. Creswell Rich, at p. 695, also bears testimony to the

value of such a restricted diet, which, indeed, he has long been in the habit of employing, while treating obstinate cases of eczema. [A reference to the *Med. Digest*, Sec. 47, 5, show that Dr. Passavant, in 1867, cured himself of an attack of psoriasis, that had lasted twenty-five years, by restricting himself to a meat-diet. After this, a patient, whose case had resisted all medical means, was cured of eczema in six weeks, under the same mode of treatment. Dr. Liveing (*Lancet*, March 1881, p. 411) finds that cutting off meat-diet cures some obstinate cases of chronic eczema even when the urine is more or less charged with sugar.—*Rep.*] R. NEALE, M.D.

31. Schüller on the Micrococci of Lupus.—Schüller (*Centralbl. für die Med. Wiss.*, No. 16, 1882) has succeeded in demonstrating micrococci in lupus, by the aid of the latest methods of examination (Weigert's). To get good specimens, it is necessary to take the smaller tubercles which lie in the subcutaneous tissue surrounding the chief mass; these small groups of round and epithelioid cells show micrococci quite regularly when stained with gentian and viewed under a Zeiss's E 4 lens, or Abbé's F 4, in the form of round granules between the cells and around the group of cells. The micrococci were everywhere free, beside each other, small, but very clear and sharply outlined, in many preparations gathered together around single largely nucleated cells which lie isolated in the vicinity of the tubercles. Each of these cells form the centre of a group of micrococci, and might be considered the breeding spots, as rows of cocci proceeded from them, forming star-shaped figures. Owing to the close packing of cells in the larger well-developed lupus-tubercles, there was great difficulty in recognising micrococci here, though they were invariably found in the sebaceous glands within the locality involved. They were more abundant the more recent the lupus formation, and the more abundantly tissue lay beneath it; and the author saw them most distinctly in the rapidly growing lupus of the face, lips, and nose; whilst, in old lupus-tubercles of the skin of the extremities, they were very few and far between.

F. WILLIAM ELSNER.

OPHTHALMOLOGY.

RECENT PAPERS.

1. PENA.—Optico-Ciliary Neurotomy in Sympathetic Ophthalmia. (*El Siglo Medico*, March 5.)

2. OCANA.—Pseudo-Ocular Hæmorrhage. (*La Independencia Medica*, Jan. 15.)

3. GRADENIGO.—Antiseptic Treatment in Operations on the Eye. (*Gazz. Med. Ital. Lomb.*, March 25.)

4. GOLGI.—The Origin and Structure of the Olfactory Tract and Bulbs. (*Gov. Med. Ital. Lomb.*, March 25, 1882.)

5. CHIBRET.—A New Method of Treating Lachrymal Stricture. (*Rec. d'Ophthalm.*, June 1882.)

6. PETRUCCO.—Ocular Symptoms in Chronic Alcoholism and Nicotinism. (*Gazz. Med. Italiana, Prov. Venet.*, July 1.)

7. PRESAS.—On a Case of Symbplepharon Cured by Transplantation. (*El Siglo Med.*, July 30, 1882.)

8. KUMMELL.—Stretching the Optic Nerve. (*New York Med. Rec.*)

9. PAMARD.—Stretching the Optic Nerve. (*Le Prog. Med.*, 1882, No. 15.)

10. SAMELSOHN.—A Centre for Perception of Colours. (*Centralbl. für die Med. Wiss.*, 1881, No. 47.)

11. STEFFEN.—Contribution to the Pathology of

Colour-Blindness. (*Archiv für Ophthal.*, Band xxvii, No. 2.)

12. MICHEL.—On Natural and Artificial Clouding of the Lens. (*Klin. Monatsbl. für Augenheilk.*, March.)

13. PFLÜGER.—On the Nutrition of the Cornea. (*Klin. Monatsbl. für Augenheilk.*, March.)

14. FRÖHLECH.—The Electro-Magnetic and the Magnetic Needle. (*Klin. Monatsbl. für Augenheilk.*, March.)

15. AYRES.—The Blood-Vessels of the Eye in Glaucoma. (*New York Med. Jour. and Obstet. Rev.*, March and May, 1882.)

16. DEBERIE.—The Treatment of Detachment of the Retina. (*Thèse de Paris.*)

17. DROSDOFF, J. P.—On Eye Affections in Epidemic Scurvy. (*Dnevnik Kazans. Obst. Vrachai* [*Diary of the Kazan Medical Society*], 1881, Nos. 14 and 15.)

18. HIRSCHBERG.—Amaurosis after Hæmorrhage. (*Zeitsch. für Klin. Med.*, Band iv.)

1. Peña on Optico-Ciliary Neurotomy in Sympathetic Ophthalmia.—Dr. Peña records a very interesting case (*El Siglo Med.*, March 5, 1882) of traumatic irido-cyclitis, the progress of which was stayed, and sight in great measure restored, by section of the optic and ciliary nerves of the eye originally wounded. The case occurred in a boy aged 13, who received a blow on the left eye, causing great pain and instantaneous loss of sight. On examination six months afterwards, the lens in this eye was found dislocated into the anterior chamber, touching the cornea by its anterior edge, and matted to the iris posteriorly by inflammatory effusions. The fundus was invisible. In the right eye, at this period, there were slight photophobia and sluggishness of the iris, with contraction of the field of vision, and sight reduced to the counting of fingers at eight feet. Otherwise, the eye appeared sound, there being no ciliary injection or corneal symptoms or pain on pressure. The diagnosis lay between irido-cyclitis, causing sympathetic ophthalmia, and sympathetic amblyopia. Enucleation was proposed, which was refused by the patient. The attempt was, therefore, made to save the right eye by section of the left optic and ciliary nerves. The operation was performed without difficulty, but was followed by considerable hæmorrhage and exophthalmia. The divided end of the internal rectus was united by sutures to the conjunctiva, a procedure much aided by De Wecker's double hook. The conjunctival opening was sewn up, and a pad of lint soaked in salicylic acid with a compress bandage placed over the eye. The same night there was considerable constitutional reaction, with vomiting and pyrexia. On the fourth day, the right eye began to improve in a marked degree. Twelve days after the operation, sight had increased from mere counting of fingers at eight feet to the reading of No. 8 of the first types, while the sympathetic process was apparently completely arrested.

2. Ocaña on Pseudo-Ocular Hæmorrhage.—Dr. Lopez Ocaña of Madrid has recently published, in the *Independencia Med.*, Jan. 15, 1882, an article on pseudo-ocular hæmorrhage. Under this name, he describes a form of capillary hæmorrhage occasionally met with in some corneal affections. He considers it a manifestation of a pathological condition of the blood, and not merely a local result of inflammation. The hæmorrhage comes from the vascular plexuses of the iris, and is seen as a thin line, occupying usually the upper margin of the cornea. Three cases are given in detail. The author strongly insists on the value of hypodermic injections of ergotine in the treatment of this affection. He

maintains that ergotine hastens absorption, while it also counteracts the blood-dyscrasia to which the hæmorrhage is primarily due. He uses it in conjunction with red precipitate ointment and collyria of atropine.

3. *Gradenigo on Antiseptic Treatment in Operations on the Eye*.—Professor Gradenigo has recently read a paper before the Royal Institute of Venice (*Gaz. Med. Ital.-Lombardia*, March 25, 1882) on the subject of antiseptic precautions in operations on the eye. The author is opposed to all such applications in ocular surgery, believing that no solution strong enough to have any real antiseptic effect can be applied to the eye without great risk of inducing inflammation, and other untoward symptoms. He believes that practically the only admissible antiseptic is pure water, preferably distilled, together with extreme cleanliness of the instruments, of the operator's hands, and of the surroundings generally. The few comparative statistics at present at hand seem to demonstrate the incontestable superiority of this method over that of the use of any strong antiseptic solutions.

4. *Golgi on the Origin and Structure of the Olfactory Tract and Bulbs*.—In an exhaustive monograph, lately presented to the Royal Institute of Lombardy (*Gaz. Med. Ital.-Lombardia*, March 25, 1882), Professor Golgi reopens the whole question of the origin and anatomical structure of the olfactory tract and bulbs. His researches lead him to the following conclusions. The fibres proper of the tract take their rise from a complicated network of nervous fibres existing in the grey substance of the olfactory bulbs. These fibres, however, have only an indirect relation with the nerve-cells of the said substance. The network of fibres already alluded to is composed (a) of the fibres of the tract minutely subdivided, (b) of ganglionic cells of a primary type, (c) of ganglionic cells of a secondary type, both which types he describes at length, (d) of axis-cylinder fibres, (e) of fibres which, emanating directly from a subdivision of the nerve-fibres, remain isolated, but eventually become connected directly with the ganglionic cells of the second type. The conclusions to which a consideration of these and other facts in connection with the minute anatomy of the olfactory bulbs have led Dr. Golgi are as follows. No sharp distinction can be drawn between the physiological functions of nerve-fibres and grey matter; it cannot be said that one is wholly conductive, the other wholly dynamic. So far as the olfactory lobes are concerned, each ganglion-cell of the primary type is in relation with nerve-fibres of three distinct categories, and it would thus appear that the doctrine of any rigorously exact localisation of the cerebral functions is in direct antagonism with the data furnished forth by the minute anatomy of the nervous centres.

5. *Chibret on a New Method of Treating Lachrymal Strictures*.—Dr. Chibret proposes a new treatment for lachrymal strictures, which consists essentially in dividing the stricture by a free incision, and subsequently dilating it gradually (*Rec. d'Ophthal.*, June 1882.) His operation is divided into three distinct stages. The first is the incision of the inferior lachrymal punctum with a Weber's knife, modified as follows by the author; viz., the blade is straight and probe-pointed, two thirds of an inch long, with a shoulder of the same length. The size of the blade is that of a Graefe's knife. The second stage consists in the introduction of the sound, which is conical, and about one line in diameter. This instrument is passed in the usual

way, and withdrawn after a few seconds. The third stage is the introduction of the modified Weber's knife a second time into the now slightly dilated duct. The knife is to be used *very freely (sic)* on the soft parts, the blade being meanwhile turned round in all directions, especially where any resistance is offered, which is generally the case, for instance, at the superior orifice of the nasal canal. The hæmorrhage following this procedure is often severe, but never dangerous. The subsequent treatment will depend on the length of time the patient can afford to give. If not pressed for time, two or three passages of the sound will be enough for the first week, two for the second, one or two for the third, one for the fourth and fifth, and these intervals may subsequently be lengthened to a fortnight or a month. The author considers a cure complete only when the catheter can be passed freely two or three months after its use has been abandoned. He prefers as a rule a No. 5 or 6 of Bowman's probes, leaving it in never less than half an hour, and not more than an hour and a half. At the end of the first week the passage of the probe should be followed by phenicated injection, administered through a Wecker's hollow sound. In cases where time is an object, the sound may be passed daily; but the result, though more quickly arrived at, is not so certain nor constant. The author has thus treated 164 patients in the last four years, with excellent results.

6. *Petrucchio on Ocular Symptoms in Chronic Alcoholism and Nicotinism*.—Dr. Petrucchio (*Gazz. Med. Italiana Prov. Ven.*, July 1, 1882) groups the ocular symptoms of chronic poisoning by alcohol and tobacco, as follows. The first group of symptoms is slight hyperæmia of the disc, with photophobia, and a reduction of vision to 1-6th or 1-5th; the colour-sense is seldom, or but very slightly altered. The second group of cases are those in which vision is considerably impaired, with dilated and sluggish pupils, and dyschromatopsia for green or the lighter shades of other colours. The discs are pale, the branches of the central artery are diminished in size, while the veins are often turgid and tortuous. In the third group there are the ophthalmoscopic symptoms of nerve-atrophy; in the fourth, there is amblyopia without any ophthalmoscopic symptoms.

7. *Presas on a Case of Symblepharon Cured by Transplantation*.—Dr. Presas (*El Siglo Med.*, July 30, 1882) reports a case in which complete symblepharon, extending from the lower border of the pupil to the base of the lower conjunctival *cul-de-sac*, was cured by a conjunctival graft from a rabbit. The conjunctiva was dissected off the globe, and a piece of bulbar conjunctiva from a rabbit applied over a space of about three quarters of an inch long by half an inch broad. Seven catgut sutures, together with a loop at the bottom of the sac, were employed, and antiseptic precautions used throughout. The healing process was complete within ten days, there remaining only a small portion of semi-atrophied tissue on the globe, the movements of which were free.

LITTON FORBES.

8. *Kümmell on Stretching the Optic Nerve*.—Dr. Kümmell of Hamburg (*New York Med. Record*) has stretched the optic nerve seven times in five cases. The eyesight had been partly or completely lost from atrophy of the optic nerves. The operation is done by making a slit in the lower and outer part of the conjunctiva near the cornea. A curved hook is passed in and back, the optic nerve is caught and stretched, not too strongly. Very slight symptoms followed the operation. In three cases, where

blindness was not complete, there was some improvement.

9. *Pamard on Stretching the Optic Nerve.*—M. Pamard (*Le Prog. Méd.*, 1882, No. 15) has presented to the Société de Chirurgie a report on a case of optic nerve-stretching. The patient was affected with atrophy of the two nerves, probably syphilitic in origin; vision was almost lost; the patient suffered from violent orbital pain and vertigo. The operation passed off very well, except that the left optic nerve was broken, but no bad result followed. The pains ceased in the orbit, to appear, but with much diminished intensity, in the back of the head; the vertigo ceased. The patient afterwards died from obscure conditions, but no necropsy could be obtained.

R. SAUNDBY, M.D.

10. *Samelsohn on a Centre for Colour-Perception.*—J. Samelsohn (*Centralbl. für Med. Wiss.*, No. 47, 1881) quotes the following case of lateral left-sided hemianopia for all colours. A man, aged 63, had in March 1876 an attack of apoplexy, which left the whole of the right side paralysed. Nine months afterwards, there was still slight paresis of the right arm and leg, without alteration of sensibility. He at that time complained of weakness of sight. He was found to have vision equal, 20-40 on each side, but this diminution of visual acuity appeared to have existed for several years. The visual fields were normal in extent; the fundus oculi on each side was also normal. On examination with colours, he was found to have completely lost colour-perception in the left half of each field, that in the right half being quite normal. On the defective side, all colours appeared a more or less saturated grey; the form-sense was quite normal on this side. This condition continued unchanged up to his death, which happened in 1880. No necropsy could be obtained. The author concludes that the paths of all the colour-perceptions of one half of the binocular visual field must pass through a part of the cerebrum of narrow limits; that this part can be effected by some local paralysing condition, without the neighbouring centres for perception of light and form being involved.

11. *Steffan on the Pathology of Colour-Blindness.*—Th. Steffan (*Arch. für Ophth.*, Band xxvii, No. 2) quotes the following case as a strong argument in favour of acquired colour-blindness co-existent with perfect perception of form and light. The patient, a man, aged 62, had a slight apoplectic attack in September 1875. Nine days after the attack, he came for advice, on account of a mistiness of the sight; he had at that time completely recovered from the apoplectic attack, as far as concerned his general health. Vision was then 20-30 for each eye; each field of view was of normal extent; but both eyes were completely colour-blind. All colours appeared to him as dirty-white of varying intensity, red and violet looking darkest. The patient was a printer, and had been all his life used to work with coloured prints. In January 1876 he was again examined; he was then completely green blind, but had a blunted perception of other colours, so that, as he expressed it, colours now by broad daylight appeared to him as they had formerly done in the dusk. He was seen again in 1880; vision was then normal, and the visual field of the usual extent; the colour-perception remained as at the last examination. The author infers from this case that there is a double organ for the perception of colour, situated near the middle line of the brain, as both halves can be thrown out of function simultaneously.

W. CHARNLEY.

12. *Michel on Natural and Artificial Clouding of the Lens.*—Clouding of the lens coming on after removal has long been known, but its causation imperfectly understood. The author (*Klin. Monatsbl. für Augenheilk.*, March) had his attention directed to this point by noticing that a lens which had become opaque after removal, reacquired its transparency from the warmth of the hand. Starting from the fact that clouded lenses contain less water than normal ones, the effect of maintaining the temperature was observed, and experiments were made both on the excised eye and on the eye in the living animal. Clouding was produced by diminishing the temperature by the aid of ice, freezing mixtures, etc., while the natural transparency was observed to return on the restoration of warmth. A large quantity of watery fluid was seen to collect between the lens and its capsule during these experiments. Similar results were obtained on treating the lens with chloride of sodium, and by immersing it in a solution of glycerine; while long-continued dry heat induced a firmer consistence, and a more transparent condition of the lens, which thereby became less susceptible of clouding on lowering its temperature. The aqueous capacity of the lens is given as 60 per cent. The lens, besides, contains 35 per cent. of soluble, and 2.5 per cent. of insoluble albumen; 2.5 per cent. of fat, with traces of cholesterine, and 0.5 per cent. ashes. From this, the author surmises that a more concentrated solution of the albuminous element may produce the optical effect of opacity, and that clouding of the lens is a physico-chemical phenomenon, the temperature and removal of water representing the physical side and the condition of the albumen the chemical.

13. *Pflüger on the Nutrition of the Cornea.*—The position taken up by the author (*Klin. Monatsbl. für Augenheilk.*, March) is that the course of the corneal lymph-stream generally is centripetal, and that after their central union the confluent streams pass from before backwards. In order to indicate the course of the lymph-stream, a few drops of a 0.25 per cent. solution of succinyl fluoresceine ($C^{10}H^{12}O^6 + 3H^2O$) were instilled into the conjunctival sac, after which the cornea fluoresced a beautiful green colour, commencing peripherally and superficially. After the disappearance of the fluorescence from the cornea, the aqueous humour was seen to have taken up the fluorescent action. Hence the conclusion that the cornea is nourished by the blood-vessels of the sclerotic and of the conjunctiva, and that the corneal lymph-stream is emptied into the anterior chamber. Next, when the anterior chamber was injected with fluoresceine, by the aid of a Pravaz's syringe in connection with a manometer, the cornea and conjunctiva remained clear, while the iris became of a deep green colour. Further, on injection of fluoresceine into the vitreous body, it was found that the aqueous humour remained perfectly clear, but when fluoresceine was injected into the anterior chamber the vitreous body became quite green, and continued to be so for some hours after the aqueous humour had become perfectly clear. From these experiments, Pflüger prefers to conclude that the aqueous humour is not supplied by the vitreous body, but rather that the stream from the aqueous humour reaches the vitreous body through the zonula.

14. *Fröhleisch on the Electro-Magnetic and the Magnetic Needle.*—Burgl and Haab are both of opinion that, before desisting from an attempt to extract splinters of iron or steel from the interior of the eye,

both the positive and negative poles should be employed, for the reason that like poles repel and unlike attract, and that consequently if (for example) the negative pole of the battery should happen to be presented to the negative pole of the splinter, no result will follow. The author (*Klin. Monatsbl. für Augenheilk.*, April), admits the truth of these propositions for weak currents, and proceeds to show that it is immaterial which pole is presented, provided the battery be strong enough. His experiments consisted in thrusting small pieces of iron and steel into the interior of the eye, and then using a strong electro-magnet, by the aid of which the metal splinters were always withdrawn, even though some of them had been thrust through the retina and choroid. In some further experiments made for the purpose of detecting the existence of minute pieces of iron and steel in the eye, an extremely sensitive instrument was used, which demonstrated the presence of as small a piece of metal as the 1-200th of a grain. Although size and proximity had some relation to the magnitude of the oscillations, no very satisfactory conclusion was arrived at with regard to distance. The author summarises his results as follows. 1. A sensitive needle employed with due care indicates the presence of small pieces of iron and steel in the interior of the eye. 2. It is advantageous to magnetise foreign bodies before using the needle. 3. The character of the oscillations indicates the proximity of the foreign body.

R. G. HEBB, M.D.

15. *Ayres on the Blood-Vessels of the Eye in Glaucoma.*—In an article on the physiology of accommodation, by Dr. William C. Ayres (*New York Med. Jour. and Obstet. Rev.*, March, May, 1882), the author alludes to the important and interesting fact that, in some cases where atropia has been used for a length of time, it has caused the appearance of an acute attack of glaucoma. Why, then, he asks, may we not attribute glaucoma to some abnormal condition of the vessels of the interior of the eye, as von Graefe suggested long ago? Especially since it is a notorious fact that none of the theories of the etiology of this disease will hold good, when closely criticised, with the exception of the choroid hypothesis, so much the more stress can be placed on this origin of glaucoma, since we see it produced in myopic eyes by atropine, or in those very eyes which are not predisposed to such an affection. On the other hand, hypermetropia is the condition in which we most frequently find the disease. The liability of atropine to bring on an acute attack of glaucoma in an eye which is chronically affected with that disease, is a further evidence that the state of the blood-vessels is probably at the bottom of the whole affair. It would also suggest that the peculiar form of the disease known as hæmorrhagic glaucoma may be only a more outspoken form of the general affection, so far as the blood-vessels are concerned, not only of the choroid, but also of the retina. It would also give us an insight into the reason why this form of condition of glaucomatous eyes forbids all operative interference on the part of the surgeon; not only from the danger of retinal hæmorrhage, but also from the profound disturbances to the choroidal circulation leading more easily to panophthalmitis.

16. *Debierre on the Treatment of Detachment of the Retina.*—Dr. Debierre, in his *Thèse de Paris*, 1881, writes that the treatment of this affection should always commence by the methodical employment of medical agents, such as rest in bed, and in

darkness, during about three weeks; the application of a compressing bandage closely fastened over the affected eye; application of Heurteloup's cupping apparatus to the temple, repeated once or twice; a slight purgative twice a week; a subcutaneous injection of hydrochlorate of pilocarpine in doses of one centigramme to one centigramme and a half every two days, so as to obtain an abundant flow of sweat and saliva. The cure is quicker, and relapse is less likely to occur, if the effusion be of recent date. In cases in which medical treatment has completely failed, surgical treatment is resorted to; but sclerotic puncture alone should be used, followed by rest in bed, and the application of a compressing bandage, tightly fastened, and continued for a long time.

17. *Drosdoff on Eye-Affections in Epidemic Scurvy.*—Dr. T. P. Drosdoff of Kazan (*Dnev. Kazan H. Obstch. Vrach.*, Nos. 17 and 15) found various eye-affections in twenty-eight of 200 scorbutic patients under his observation. In eighteen cases there was ecchymosis into the ocular conjunctiva, associated in nine cases with extravasation under the skin of the palpebra; both eyelids were in most cases simultaneously ecchymosed. In eleven patients the conjunctiva of both eyes was affected, in five that of the right eye alone, in three that of the left alone. In three instances only, the indirect cause of the conjunctival hæmorrhage was some trivial injury; in the remaining cases there was no apparent cause found, except the scorbutic state itself. Four patients showed a diffuse serous keratitis which led, in one instance, to atonic ulcer of the cornea. In two patients scorbutic iritis was developed, accompanied, in one of them, with hæmorrhage into the anterior chamber. The remaining four patients were suffering from hemeralopia. The scorbutic lesions of the cornea and iris differed from the common forms of keratitis and iritis in two particulars: 1. In their torpid character; 2. The local treatment alone invariably remained useless. [In the LONDON MEDICAL RECORD, April 1881, p. 163, Dr. Fialkowsky's article, treating the same subject, is reported. Recently, in *Vratch.*, 1882, No. 4, pp. 52-53, Dr. A. Stchasny of Kieff has recorded two cases, one of them being of episcleral and palpebral (subcutaneous) extravasations of one eye, and another of similar changes of both eyes, accompanied with dirty bluish opacity of the whole left cornea. The eyes of both patients recovered under general anti-scorbutic treatment.—*Rep.*]

V. IDELSON, M.D.

18. *Hirschberg on Amaurosis after Hæmorrhage.*—The patient, a man aged 52, had severe hæmatemesis, followed by loss of vision (*Zeitschr. für Clin. Med.*, Band iv, Nos. 1 and 2). The left disc was somewhat white and cloudy; the right was evidently the subject of neuritis, which rapidly increased for the next eight days. The left eye now showed neuro-retinitis. At this period the vision was on the right side 0, on the left side $\frac{1}{4}$. On the thirty-sixth day there was on the right side amaurosis, with optic atrophy and narrow arteries; on the left side the vision was $\frac{1}{2}$, with normal ophthalmoscopic appearances. After $3\frac{1}{2}$ years the patient had another attack of hæmatemesis, from which he died. The *post mortem* examination showed cancer of the stomach. Examination of the right fundus and optic nerve showed complete atrophy of the nerve, no trace of nerve-fibres being visible. The sheath of the nerve was scarcely if at all thickened, and the interval between the nerve and its sheath was

empty. Whether it had contained blood at the period of inflammation, could not of course be decided. The right papilla showed marked evidence of severe inflammation. The left nerve showed a partial atrophy of its circumference, and also a partial papillitis.

JAMES ANDERSON, M.D.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. GAUCHER.—Lead-Poisoning. (*Rev. de Méd.*, 1881, No. 11.)
2. RICHET.—The Action of Large Doses of Sodium Chloride. (*Bull. de la Soc. de Biol.*)
3. SCHIFFER.—Guachamaka Poison. (*Nature*, 1882, p. 620.)
4. SELMI.—On Phosphorus. (*Archiv. der Pharm.*, 3rd series, Band xix; *Jour. of Chem. Soc.*, 1882.)
5. CZUMPELITZ.—A New Test for Alkaloids. (*Chem. Centralbl.*, 1881; *Jour. of Chem. Soc.*, 1882.)
6. Diseases of Workmen in Bichromate of Potash Manufactories. (*Lancet*, Jan. 28.)
7. SCHMIEDEL.—Poisoning by Binaxolate of Potash. (*Friedreich's Blätter für Gerichtl. Med.*, 1882, p. 121.)
8. SELMI and OTHERS.—On Ptomaines. (*Jour. of Chem. Soc. of London*, 1882.)
9. LESSER.—On Hanging. (*Viertelj. für Gerichtl. Med.*, Band xxxvi.)
10. Post Mortem Injury from Ants. (*Pharm. Zeit.*, 1881, No. 102.)

1. *Gaucher on Lead-Poisoning.*—M. E. Gaucher (*Revue de Méd.*, No. 11, 1881) has examined a considerable number of cases of lead-poisoning, and has arrived at the following conclusions. 1. Nutrition is lowered, assimilation is diminished, the density of the urine is decreased, the excretion of urea, chlorine, and phosphoric acid is below the normal. 2. During the active stage, the red corpuscles are for the most part destroyed, giving rise to saturnine jaundice and to the presence of blood-pigment in the urine, and causing the anæmia, which is an early symptom. 3. The urine is at first scanty, and highly coloured, afterwards very abundant and clear, this polyuria having apparently a nervous origin. 4. Transitory albuminuria is not uncommon; the albumen is non-retractile, and is derived from the anatomical elements. 5. The elimination of foreign substances, given as drugs, is delayed, and is moreover intermittent and fitful.

R. SAUNDBY, M.D.

2. *Richet on the Action of Large Doses of Sodium Chloride.*—It is well known that moderate doses of sodium chloride injected into the veins are harmless. Falck in 1872 demonstrated that large doses, on the contrary, may result in death; by what physiological process he did not explain. M. Charles Richet (*Bull. de la Soc. de Biol.*) has reinvestigated the question, and states that a dose of sodium chloride, equal to 1 gramme of sodium, administered in the proportion of 1 gramme to every kilogramme of the animal's weight, or fraction of a kilogramme for small animals, invariably causes death from asphyxia, but not as in asphyxia resulting from obliteration of the trachea. The heart is not paralysed, but the respiratory nerve-centres; the respiratory movements become tetanic, and consequently not sufficiently ample. The action of sodium chloride is similar to that of strychnine.

The fact that artificial respiration impedes its action is a new fact demonstrating the analogy.

W. VIGNAL.

3. *Schiffer on the Guachamaka Poison.*—Dr. Schiffer has described the effects of the guachamaka poison (*Nature*, 1882, p. 620) before the Physiological Society of Berlin. An extract was made of the poison from the wood, which, like curare, is soluble in water and alcohol, and gives the general reactions of an alkaloid. The effects of the extract were tried on frogs, pigeons, and rabbits. A latent period of about fifteen minutes was always noticed. This was followed by a loss of vital and motor powers, although the activity of the heart and of the organs of respiration was not impaired. When small doses were given, the animals recovered after a few days; when large doses were given, the impairment of their powers ended in death. The muscles could be stimulated directly, but not indirectly through the medium of the nerves. The guachamaka poison had, consequently, exactly the same effects as curare. The circumstance that both these poisons must be administered in twenty-five times as large quantities, when given by the mouth, as when administered hypodermically in order to produce the same effects, gave origin to some attempts to discover the reason of this difference. It was ascertained that neither are these poisons very rapidly thrown out of the system by the urine, when they have been absorbed, nor are there substances present in the alimentary canal which decompose them. The probable cause of the difference is, that these poisons are with difficulty absorbed from the stomach.

4. *Selmi on Phosphorus.*—Selmi (*Arch. der Pharm.*, 3rd ser., Band xix, p. 276; *Jour. of Chem. Soc.*, 1882, p. 325) has examined the urine in two cases of phosphorus-poisoning, one of which ended fatally. The urine, with the exception of that first passed in the case that recovered, was found in both cases to evolve in the cold a phosphorous vapour which blackened silver nitrate. Bodies behaving towards nascent hydrogen like the lower oxides of phosphorus, were present in the urine, especially in the fatal case. They decreased, but did not disappear, under the administration of oil of turpentine. A neutral volatile phosphorus compound, perhaps formed by the action of heat, was found in the urine in both cases. The phosphorus bases (phosphides) were met with in very small quantity in the fatal case; but were comparatively abundant in the non-fatal case. In the fatal case, the lower oxides of phosphorus were found in abundance. The phosphides varied in their nature at different periods of elimination, the amount of phosphorus being larger at the later than the earlier periods; but, according to the experiments of Ciaccio, the toxic power of those first eliminated is greater than those eliminated after the administration of oil of turpentine. Two volatile phosphides were constantly found. In the brain were one volatile and two fixed phosphides, all richer in phosphorus than those occurring in the urine. The volatile phosphide in the brain was less poisonous than those in the urine; but the fixed were far more poisonous. From the liver, three phosphorus bases were also obtained, different from those met with in the urine or in the brain; two were volatile and rich in phosphorus, and one of these had the odour of conine. In the brain a phosphorus compound was found, which yielded phosphuretted hydrogen, when treated with nascent hydrogen, but no such compound was found in the liver.

5. *Czumpelitz on a New Test for Alkaloids.*—Czumpelitz (*Chem. Centralb.*, 1881, p. 710; *Four. of Chem. Soc.*, 1882, p. 340), starting with the idea that the colour-reactions of the alkaloids are due to removal of water, treats the substance to be examined with a few drops of solution of zinc chloride (15 grains of zinc chloride to one fluid ounce of hydrochloric acid, and one ounce of water), and then evaporates on the water-bath. The alkaloids and neutral principles give the following colour reactions: strychnine, a rose-red; narceine, olive-green; thebaine, gold; veratrine, red; quinine, pale gold; digitalin, chestnut-brown; salicine, red-violet; santanine, blue-violet; cubebin, carmine-red.

6. *Diseases of Workmen in Bichromate of Potash Manufactories.*—The *Lancet*, of Jan. 28, 1882, contains a communication from a person employed in a Russian chrome factory, with regard to a disease prevalent among the workmen in bichromate of potash. At first a small hole appears in the septum of the nose, which gradually becomes larger, and, finally, only leaves a small portion of the septum intact. Here the destructive process ceases. Neither the upper respiratory organs, nor the lungs appear to be in any way affected. The disease begins with a sensation of tickling in the nose, and, about eight days later, bleeding of the nose sets in for a few days; and, in a few days more, the malady progresses painlessly. Some workmen escape it altogether, although employed for years in the factories; while others are attacked in the first few weeks. An examination of the workpeople, lately made, revealed the fact that more than fifty per cent. had suffered from this disorder. There are said to be only six chrome works in the world; three in Glasgow, and one each in Austria, Russia, and America, so that opportunities of observing these cases are necessarily limited.

7. *Schmiedel on Poisoning by Binoxalate of Potash.*—Dr. Schmiedel (*Friedreich's Blät. für Gerichtl. Med.*, 1882, p. 121) reports a fatal case of poisoning of a woman by this, the salt of sorrel. It was supposed that an ounce of the salt was taken; and after death 13 grammes, or nearly half an ounce, was recovered from the stomach. She was seen to vomit, and was found dead shortly after. Death occurred within an hour of taking the poison. At the necropsy, the mucous membrane of the stomach was found to be dark grey, and the vessels filled with very dark blood, clearly visible as cords from the outer surface of the organ. The mucous membrane of the trachea was intensely red. On the right lung were numerous minute extravasations of blood, each of the size of a millet-seed.

THOMAS STEVENSON, M.D.

8. *Selmi and others on Ptomaines.*—Selmi (*Reale Accad. dei Lincei*, Band v, pp. 174, 243; *Journ. of Chem. Soc. of Lond.*, 1882, p. 741), suspecting that in various diseases there are found in the tissues substances of a poisonous nature which, together with the alteration of the tissues, or by their sole action determine the death of the patient, has analysed the urine of patients affected with progressive paralysis, miliary fever, rheumatic tetanus, and other diseases; also the urine of the insane; and finds that in all these cases, as in the animal body after death, poisonous bases are formed. The urine of a patient affected with progressive paralysis, accompanied by increasing imbecility, yielded: 1. a base very like nicotine, but not identical therewith, having a specific poisonous action, especially on the spinal cord, destroying its activity,

and diminishing the general sensibility, the respiration, and the cardiac pulsations; 2. another base, but in much smaller quantity, having the odour of conine. A base having the same odour, also, in very small quantity, was extracted from the urine of a patient affected with rheumatic tetanus. From the urine of other patients, and from the blood and viscera of a hare, various other bases were extracted, of somewhat indefinite character, but all possessed of poisonous properties. Paterno and Spica (*Gazzetta*, 1882; *Journ. of Chem. Soc. of Lond.*, 1882, p. 741) record experiments made with the view of ascertaining whether substances identical with, or similar to, ptomaines, can be extracted from animal fluids in their normal state, before they enter into putrefaction. The liquids experimented on were fresh blood and fresh egg-albumen, solutions of which were tested with various reagents commonly used for the detection of the alkaloids, e.g., phospho-molybdic acid, potassio-mercuric iodide, mercuric chloride, tannic acid, etc., with the result of showing that the reactions thus obtained are exactly similar to those produced by the same reagents in solutions of the so-called ptomaines extracted from the dead animal body. These researches certainly show that the experiments of Selmi require confirmation. With reference to the search for poisonous alkaloids in a dead body by the hypodermic injection of fluids extracted therefrom into the body of a living animal, Paterno and Spica point out the necessity of ensuring that the fluids so injected are free from infective germs, as otherwise it would not be safe to infer that any poisonous effects that may result from their injection are really due to the presence of alkaloids.

9. *Lesser on Hanging.*—Dr. A Lesser (*Viertelj. für Gerichtl. Med.*, Band xxxvi, p. 258) describes an interesting case of the accidental strangulation of an epileptic during a fit, and the means by which he was enabled to arrive at a positive conclusion that the ligature (the collar of a shirt) had exerted its pressure during life. The point was of importance, as the deceased was found dead in a room occupied by himself and a fellow-lodger. Taken into consideration in conjunction with the previous observations of Lesser and Liman (*Ibid.*, Band xxxii, p. 219; xxxv, p. 203), the paper forms a valuable contribution to the literature of medical jurisprudence.

10. *Post Mortem Injury from Ants.*—A curious case is recorded in which the lesions caused by ants on the dead body of a child gave rise to unfounded suspicions that its death was due to violence (*Pharm. Zeitung*, 1881, No. 102). At the necropsy, it was found that the upper and lower eyelids, as well as the adjacent skin, were of a dark brown colour, and of a parchmenty consistence, with red edges. The dried crust readily peeled off. The skin had an acid reaction, and a trace of formic acid was detected in it. Similar patches were found on the nose, and a black line ran from the inner canthus of the right eye over the cheek to the nostril. There were other similar marks on the cheeks, neck, and shoulders. Had it not been for the circumstances that a dead ant was found in the mouth, confirming the statements of the parents that ants had crawled over the body after death, and the detection of formic acid on the skin, it might have been supposed that death had resulted from violence, and not, as was asserted, from convulsions.

THOMAS STEVENSON, M.D.

REVIEWS.

On Ovarian and Uterine Tumours: their Diagnosis and Treatment. By T. SPENCER WELLS, Vice-President of the Royal College of Surgeons, &c. London: J. and A. Churchill. 1882.

CONSISTENTLY with the advance of time, the recent improvements in the art of surgery, and the increase of his own experience, Mr. Spencer Wells has favoured the medical public with three works of great interest, which follow each other, not so much in the form of editions, but rather as Darwinian developments, where the fittest material survives and flourishes. The author's *Diseases of the Ovaries*, issued in 1865, was purely a case-book, containing one hundred and fifteen cases of ovariectomy described at full length, as well as a further account of some incomplete operations. A few years passed by, ovariectomy became more thoroughly established, and minute histories of individual cases were no longer needed to encourage others. The author's practical experience, and that of other surgeons, had become large enough to allow generalisations; hence, in 1872, Mr. Wells was able to complete a work in which ovariectomy was made into a system and viewed from its historical, anatomical, pathological, clinical, and surgical aspects. This issue of 1872 became rapidly known all over the United Kingdom, Europe and America, and, as its author has ever since remained actively associated with ovariectomy, the present work will be read with interest by those who are acquainted with its predecessor of ten years past. A surgical Rip Van Winkle would find much to astonish him in this new edition, had he slept since 1872; but, in actual fact, those who have for some time looked forward to its publication must be conversant with the recent changes and improvements in surgical science, and very desirous of learning how far they have influenced Mr. Spencer Wells's opinions and practice. Thus, astonishment will be modified, but interest increased, amongst readers who have followed in the vanguard of surgical progress. It must not be forgotten that all the innovations of modern surgery pertinent to Mr. Wells's subject have been discussed by him before societies, or in the pages of medical journals; but authors are generally careful in qualifying and modifying opinions which they intend to crystallise for ever in the pages of a text-book. Hence, it is for the author's precise opinions, rather than for his earliest views on new questions, that this book will be read with interest.

A review of this work must, then, consist of an account of the new matter that it contains. The additions are so many, that they cannot be discussed at length in these columns. The antiseptic question must first be considered, and intimately associated with that topic is the treatment of the pedicle. We find that Mr. Wells practises 'complete Listerian precautions', without being a profound believer in all the details of antiseptic precautions. The 'toilet of the peritoneum' he can justly claim as his own. The author observes that he has long insisted upon the great importance of employing perfectly pure sponges, and believes that this object is most thoroughly attained if the sponges be soaked in a carbolic solution after they have been rinsed out in pure water. After an operation, Mr. Wells continues his old plan of keeping the cleansed sponges in a weak solution of sulphurous acid. The spray our author still employs; but he is sceptical about its

efficacy, and doubtful of its precise share among the causes of diminished mortality after operations.

Mr. Wells considers that one of the great advantages of the new system lies in the fact that it renders complete intraperitoneal ligation of the ovarian pedicle a safe method of treatment, whilst prior to the introduction of antiseptics the author always preferred the clamp, at least when the pedicle was long enough for its application. In Mr. Wells's opinion, it is not advisable to interlace the loops of the two threads employed in transfixion of the pedicle, as he believes that, in tying the second knot, its loop will drag on the first loop, already drawn tight, if they be interlaced. He, therefore, avoids interlacing the two threads after transfixion, and ties their ends separately, without previously twisting one end of one thread round the corresponding end of the other; for additional security, the author recommends that a separate ligature should be tied between the transfixing threads and the uterus. He is further in favour of drawing the ligatures as tight as possible, having no fear that, in so doing, all vascular supply will be cut off from the distal end of the stump. These matters relating to the treatment of the pedicle are among the most important expressions of individual opinion and practice in the entire book; we refer the reader to page 318, where the question about the interlacing of the transfixing threads, not readily explained by words, is made clear by a diagram.

The 1,000 cases completed in June, 1880, are recorded in this edition in the statistical tables drawn up for previous communications to the Royal Medical and Chirurgical Society. We further learn that 71 ovariectomies have been performed by Mr. Wells between the date of completion of the thousand and May 1st, 1882. The mortality of this recent series, including many cases rejected, as we understand, by other surgeons as unfavourable, amounts to four. The successful experience of Dr. Keith is noted in this work, and we also find an instructive account of the history of ovariectomy in foreign lands.

Castration, *not* termed oöphorectomy in Mr. Wells's pages, forms the subject of a separate chapter. The author speaks with disfavour about the extreme frequency with which the operation has been resorted to in this country, in the hope of curing certain vague nervous disorders; nor is Mr. Wells a strong advocate of this proceeding when undertaken with a view of checking the growth or hæmorrhage of uterine fibroids.

The chapters on removal of the uterus, under different conditions, are of great interest, and the tables of statistics relating to operations in cases of uterine tumours cannot fail to prove of high value as a guide to future operators. Mr. Wells is in favour of sewing the cut edges of peritoneum over the raw surface of the uterine stump, after removal of a fibroma with or without a portion of the body of the uterus. He admits, however, the successful results of entire removal of the fibroid uterus, with clamping of the cervix, as shown by the recent experiences of the surgeons of the Samaritan Hospital. In a chapter on partial amputation and complete excision of the uterus, we find a full account of the author's case of successful removal of a pregnant cancerous womb, the only case of the kind followed by recovery and temporary restoration to health. Whilst advocating the extirpation of a cancerous uterus during pregnancy, Mr. Wells considers that the case is far different when the patient is not pregnant. Under such circumstances, the immediate risk to life is great, whilst

caustics, cauterisation, or scraping will hold the disease in check for a time. This applies to ordinary cases, where the disease begins in the cervix. In instances where the fundus is affected, if any surgical measures be admissible, excision by the vagina is the resource to which, in Mr. Wells's opinion, our present knowledge inclines us.

Mr. Wells expresses a hope, in his preface, that the origin and causes of ovarian tumours may be some day understood, so that, the means of arresting the development and progress of these morbid growths being discovered, we may be shielded from the reproach of being able only to offer the ultimate resource of relief by excision. Our limited space forbids us from entering into closer details of the new material contained in Mr. Spencer Wells's work, which, as a publication, forms a large, handsome, and well-printed volume, worthy of its author and its subject.

ALBAN DORAN.

The Sphygmograph: its History and Use as an Aid to Diagnosis in Ordinary Practice. By R. DUDGEON, M.D. London: Baillière, Tindall, and Cox. 1882.

THIS little work, which is intended to give 'some information for beginners on the subject of pulse-writing, and especially some fuller instruction on the use of the instrument (which the author introduced to the profession eighteen months ago) than is to be found in the printed directions given with the instrument,' admirably fulfils its purpose.

The first twenty-eight pages contain a short, but sufficiently full, account of the different instruments which have been, from time to time, introduced for the purpose of measuring and graphically recording the pulse-wave, and the condition of the blood-pressure.

This is followed by an analysis of a normal pulse-tracing, and by an account of the more important modifications which occur in disease. We doubt whether the tracing shown in figure 17—a tracing taken from a patient in the cold stage of ague—is an accurate representation of the pulse-wave. We are rather disposed to think that many of the vibrations in it were produced by fine muscular tremors; but, with this exception, all the illustrations are good.

We agree with the author in thinking 'that the sphygmograph cannot be relied upon *with certainty*' (the italics are our own) 'to discover organic affections of the heart'; but we also agree with most writers in thinking that valvular diseases do, as a rule, communicate definite characters to the sphygmogram—a proposition which Dr. Dudgeon seems to doubt, when he says, 'I am not going to criticise what other writers on sphygmography have asserted, but I might easily show, from my own collection of sphygmograms, that tracings said to be characteristic of mitral and aortic valvular diseases, are frequently made by pulses of subjects where no such imperfections exist; and, on the other hand, the pulse-tracings in the case of marked mitral or aortic valvular disease often do not differ from normal sphygmograms.'

Dr. Dudgeon, we think, over-rates the disadvantages of Marey's sphygmograph. Possibly we may, by long familiarity, be prejudiced in its favour; but we confess that, for home practice or hospital work, we prefer it to any instrument with which we have yet worked. The difficulty of applying it is really nominal, and, after a little practice, it can be adjusted with ease and quickness. We are, too, disposed to think that, by means of Dr. Mahomed's

modification, the pressure can be more accurately regulated than by any other instrument—a most important point, as all workers with the sphygmograph will allow. But, while speaking in this way, we would not wish for a moment to appear to detract from the merits of Dr. Dudgeon's most ingenious instrument. Its small size, the facility with which it can be applied in any position, and its cheapness, are great advantages; while excellent tracings may be obtained by it, as the numerous illustrations in Dr. Dudgeon's book show. The representation of the percussion stroke obtained by it is, we think, more natural than that obtained by Marey's instrument.

We would advise all workers with Dr. Dudgeon's instrument to purchase his book, and peruse it for themselves.

BYROM BRAMWELL, M.D.

Therapeutical Remembrancer: presenting in detail all Medicaments accredited by the British Pharmacopœia, with copious Supplementary Tables offering or recalling suggestions or resources from the Materia Medica, etc. By J. MAYNE, M.D., L.R.C.S.E., L.S.A. Second Edition, Revised. London: J. and A. Churchill. 1882.

THIS work, the author tells us, is intended to serve the purpose of 'a convenient and reliable digest, and refresher of the memory, in respect of all names of individual medicines sanctioned by pharmacopœial authorisation; their uses, the modes suitable for their exhibition, either simply or compounded.' It would undoubtedly be of value both to students and practitioners were it trustworthy; but, unfortunately, it is quite unreliable. The therapeutics are the therapeutics of a bygone age, and are as antiquated as the language in which the author clothes his information. We would willingly say something in favour of the book, but it is impossible. It would be absurd to recommend it as a work of reference either to students or to the busy practitioner, to whom accuracy is all-important. The account of the therapeutic uses of arsenic and arsenious acid, given on page 2, is puerile—'Elephantiasis, lepra, etc., for cancerous diseases'. On the next page, we find that bromine is recommended in 'Scrofula, and its swellings, with same intention as (if more powerful remedy seems to be indicated than) iodine', and the dose is given as from 1-16 to gr. 80! Of bromide of ammonium, all we are told is that it is 'considered more searching than the foregoing', whilst the therapeutic uses of bromide of potassium are summed up in the words 'ascites, enlarged spleen, etc.' Atropia, we are told, is 'intended only for external use', and there are many other statements equally startling. To consult this work is like reading a very bad examination paper. It was a great mistake to publish it in its present inaccurate condition, and the author would do well to submit his manuscript to some impartial medical friend, should he have any idea of attempting another work of this description.

WILLIAM MURRELL, M.D.

NEW INVENTIONS.

SOAP 'LEAVES.'

UNDER this name a novelty has been here introduced by Messrs. Reithoffer and Reffe of Vienna, and placed in the hands of Messrs. Willeringhaus,

Klinker, and Co., 13, Hamsell Street, E.C., their English agents. The 'leaves' are about 3×2 inches in size, and are done up in packets of twenty-five each, and enclosed in cases of thick paper or leather, the latter with a simple fastening, similar to a pocket-book. Each one when required is torn off like a cigarette paper, and is sufficient for what an Englishman would call a 'good wash.' The Englishman or woman who enters a French or other Continental hotel for the first time, and finds that soap has been forgotten amongst the contents of the dressing bag, has either to pay a visit to the nearest 'Magasin de Parfumerie', or be satisfied to be charged an extortionate price for his or her tablet of soap by the hotel-keeper. These little books of leaves are so arranged that they can be fixed in the outer casing in a moment, and those who decide to adopt them would probably lay in a stock of them to guard against contingencies. We believe that medical men will look upon this arrangement favourably, as there are instances of daily occurrence where the presence of a book of these soap-leaves in the pocket would materially conduce to the safety and comfort of the possessor. To boating men, and others engaged in out-door avocations, where soap is often wanted and not readily obtained, they will be a great boon. They have the further advantage of being moderate in price. We may add that Mr. Walter Lawley, 78, Farringdon Street, is retail agent for the 'soap-leaves', and is selling them to the profession 'carbolised' rather extensively.

MALTOPEPSYN.

The Maltopepsyn of Hazen Morse, of Canada, is said to be a combination of saccharated pepsine, saccharated Pancreatine, acid lactophosphate of lime and exsiccated extract of malt. The dose is said to be ten grains, but we do not find that even in larger quantities it possesses any very active peptic properties.

DR. STOKER'S 'ADJUSTABLE' TONSILLOTOME.

Dr. George Stoker writes in the *Brit. Med. Jour.* of July 22, 1882, that he believes it is an acknowledged fact that in order to remove successfully an enlarged tonsil with a tonsillotome, it is important that the ring of the instrument should accurately fit the gland to be excised. As tonsils vary in size, it thus becomes necessary to have a set of tonsillotomes, usually five or six, and of different sizes. It is in order to obviate this difficulty, that he has devised the instrument pictured.

The accompanying plate shows the upper surface of the tonsillotome, *i.e.*, that which looks towards the centre of the mouth when the instrument is in position. It will be seen that there are two plates (1 and 2), which glide one upon the other, being bevelled off to fine edges at their continuous margins, thus as far as possible always presenting a flat surface for the knife to glide upon. These plates are fastened together behind with two binding screws, worked with a key, which enables them to be so securely fastened as to prevent any chance of their slipping. In order to adjust the instrument, the binding screws are to be loosened, the existing blade removed, and another size introduced, the

blades, as may be necessary, being either diverged or approximated.

The advantages Dr. Stoker claims for the instrument are these. 1. It can be adjusted to suit any sized gland, as the number of blades is practically unlimited. 2.



It is portable, providing, as it does, one instrument instead of many. 3. It is cheap, being half the price of an ordinary set of five instruments, which is the number usually required. The instrument figured was made for Dr. Stoker by Messrs. Mayer and Metzger.

DIETETIC NOVELTY.

ARSENICAL WATERS OF LA BOURBOULE.

La Bourboule is situated in an open valley, about four miles from Mont Dore in the Auvergne. It is largely frequented by English and others who go thither to drink the famous waters. There are several springs, of which the most popular are those known as La Source Choussy and La Source Perrière, the latter being one of the richest arsenical waters discovered. It is a hot spring, the surface-temperature being over 120 deg. Fahr. It has been frequently analysed, and is known to contain about 28 milligrammes of arseniate of soda to the litre, so that a tumblerful would represent an ordinary medicinal dose. In addition to arsenic, it contains common salt and bicarbonate of soda, and it is not improbable that the salts facilitate the absorption of the

active constituent. A water having this composition must of necessity possess active medicinal properties, and we are not surprised that it is used with great success in the treatment of many obstinate affections. Arsenic is one of the most valued of our pharmacopœial drugs, and its efficacy is greatly increased when administered in a dilute form and in combination with other salts. In the treatment of phthisis and many kinds of chronic lung-disease, it is by far our best remedy, and no mode of treatment yields such a large percentage of cases of 'cured consumption'. In asthma, emphysema, and chronic bronchitis, its value is so generally recognised that no detailed account of its mode of employment is necessary. In many stomach affections—take, for example, the gastritis of those addicted to alcoholic excess—arsenic is of very great value, and may be prescribed with confidence. In skin-diseases its use is well known; in the scaly varieties it is almost a specific. In anæmia—the more severe forms, or where iron cannot be taken—the waters of La Bourboule are especially indicated, and in scrofula and many glandular affections their utility is thoroughly established. In chronic neuralgia, chronic rheumatism, and even rheumatoid arthritis, the water of the Perrière spring should be given freely. The season of La Bourboule is from June to the beginning of October, and undoubtedly most benefit would be derived from drinking the water at the source. The treatment should extend over a period of some weeks, and in some cases even months. The water of the Perrière is now largely imported, and is obtainable without difficulty. The dose is one glass or more three or four times a day, or even oftener. It is said that it may be taken in claret, but this is hardly necessary, as it is a pleasant drinking-water, and has none of the flatness of many mineral springs. It is best taken after meals, but, in some cases, it may be advisable to administer it on an empty stomach. The possibility of using it in the form of spray in phthisis and asthma is worth considering.

SPARKLING SAUMUR CHAMPAGNES.

Perhaps Dr. Druitt conferred a greater boon upon the public than even he anticipated when directing the attention of the medical profession to the above-named wines—indeed, it is difficult to over-estimate the advantages to be derived by those of delicate constitution from the moderate use of the pure light and exhilarating sparkling wines produced in the ancient French province of Anjou, and named after its capital—Saumur.

Unfortunately, however, these wines, which were originally shipped to this country by Messrs. Ackerman-Laurance (who enjoy the reputation of being not only the oldest but also the first house in Saumur) no sooner began to find favour with the public than a host of imitators sprung up, and the United Kingdom was inundated with not only the most inferior descriptions of wine from the outlying poor and comparatively uncultivated districts of Saumur, but from every other district of France, producing any wine that could be sweetened and made to effervesce. And as all these varieties—the wines of fine quality, medium quality, and common grades—were, and are still, shipped to this country under the same designation, that of 'Saumur', it has become most difficult to discriminate between the good, indifferent, and bad varieties alluded to, and,

as a natural consequence, there is a danger of the present consumption—many thousands of dozens annually—being seriously diminished.

Under these circumstances, we cannot sufficiently commend Messrs. Ackerman-Laurance for the decision, which we learn they have lately arrived at, namely, only to ship their special brands of 'Brut Royal' and 'Dry Royal' Saumur Champagnes to those houses who are willing to supply them to the public as imported, that is, with the brand of the wine and name of the shipper on the cork and label as a guarantee of quality, a course adopted many years ago by shippers of the finest champagnes, whose brands are now so celebrated.

So far as Messrs. Ackerman-Laurance are concerned, we should hope for and predict a like result, for we can bear testimony to the excellent quality of their 'Royal' brand of Sparkling Saumur, and consider the wines in question, whether it be the 'Dry Royal' for ordinary consumption, or the 'Brut Royal' for the use of invalids, as pure, wholesome, and exhilarating as the most expensive champagnes, while they can be obtained at about half the cost of the latter, namely, three shillings a bottle, a price which brings them within the reach of all consumers of sparkling wines.

MISCELLANY.

MISS MARIANNE NORTH, whose admirable botanical drawings exhibited at Kew have excited so much admiration, has sailed for the Cape to resume her task of painting the flora of all parts of the world. After spending some months in South Africa, she proposes to visit Madagascar and the Seychelles Archipelago, both of which present rare and beautiful objects for the pencil. As before, she travels perfectly alone.

NERVE-STRETCHING.—This subject has, of late, attracted so much attention, that the following extracts, translated from a letter to the editor of the *Deutsch Medicin. Wochenschrift*, will doubtless be read with interest. The writer, one 'Dr. Dehner,' states:—'I have now stretched the ureters, in about 20 cases of granular kidney, with the most marked results. The patients passed much less urine after the operation than before, and the albumen was diminished. In one case, I am bound to confess, the ureter was torn through and I found myself compelled to establish a permanent fistula in the abdominal wall. One other case came to an end, three months later, from cerebral hæmorrhage; the other symptoms, however, of the renal mischief had been much relieved. The anatomical appearances, *post mortem*, were interesting. Superficially, there was, indeed, the ordinary condition of contracted kidney, and doubtless pathological anatomists, of a certain stamp, and carping histological pedants, would have discovered but little else. To me, however, even a rapid examination of the degenerated spots revealed certain cell formations which I could at once recognise as newly formed epithelium. From a circumscribed spot on each of these cells there exuded a tiny drop of fluid, which gave (under the microscope) the most distinct response to the murexide test.' Further, he says: 'I have lately stretched the hepatic duct in the case of a man with cirrhosis of the liver, and I intend shortly to stretch, in chronic contraction of the lung, not only the pneumogastric nerves but also the bronchi, with great results. Might not, also, general paralysis of the insane be cured by simple extraction of teeth, for this operation is always accompanied by pulling and stretching of the respective twigs of the dental nerve? I will try it. A new era is dawning! Here is, indeed an art, and, while we live, let us stretch!' To enable our readers who do not know German to understand this lively production, we may

inform them that 'Dehner' signifies 'stretcher,' and that, as a proper name, it is not to be found in Dr. Börner's *Reichs Medicinal-Kalendar*.

THE HARVEIAN ORATION.—On June 24th, the annual Harveian oration was delivered at the Royal College of Physicians by Dr. George Johnson. Dr. Johnson began his oration by referring to the systematic attempts which have recently been made in Italy—first, to deprive the illustrious Harvey of the honour which for two centuries and a half has by almost universal consent been conceded to him as the discoverer of the circulation of the blood; and, secondly, to claim for the Italian Cesalpino the credit of having anticipated Harvey. In 1876, a monument in honour of Cesalpino was uncovered in Rome. At the inauguration of that monument, in the presence of a large assembly of Italian notables, orations were delivered by Professors Scalzi and Maggiorani. Both orators referred in terms of praise to a recently-published work (*La Scoperta della Circolazione del Sangue*, Milano, 1876) by Dr. Ceradini, Professor of Physiology in the University of Genoa. The author of this work professes to give the true history of the discovery of the circulation, and he maintains that Harvey, during the four years, from 1598 to 1602, which he spent as a student of medicine at Padua, learnt from the writings of Cesalpino, the chief of which had been published about thirty years before, the doctrine of the circulation, which in the year 1628 he published as his own. Dr. Ceradini admits that Harvey, having undergone great labour in his endeavour to make the doctrine known, and to overcome the prejudices of those who opposed it, may, to some extent, be pardoned for having at length persuaded himself that Cesalpino's discovery was actually his own; but this, he maintains, affords no excuse for the conduct of Harvey's fellow-countrymen, who still believe, or pretend to believe, him to have been the discoverer of the circulation, perhaps, he sarcastically adds, in order not to deprive themselves of the pretext for an annual festal celebration of his memory. Dr. Johnson then proceeded to show how utterly without foundation are these charges of plagiarism against Harvey, who could not have obtained from Cesalpino's writings that which is not to be found therein—namely, a knowledge of the circulation of the blood. It was proved by quotations from Cesalpino's works that in no respect was his knowledge of the circulation in advance of that of his contemporaries and immediate predecessors. Harvey was the first to describe not only the course of the blood through the systemic vessels, but also the true function of the heart as the means by which the blood is constantly propelled from its left side through the arteries over the whole system, and thence through the veins to the right side of the heart, whence, passing through the lungs, it completes the circle by again reaching the left side. The orator concluded by saying that, Harvey having obtained his knowledge of anatomy at Padua under the famous Fabricius, although we cannot concede to Cesalpino the honour of having discovered the circulation of the blood—a distinction which he himself would probably never have thought of claiming—we willingly express our gratitude to Italy for having given our celebrated countryman the anatomical training, without which he could not have made his great discovery—a discovery which throughout all ages and by all civilised nations will be looked upon as the foundation of modern physiology, and, therefore, of scientific medicine.

THE USE OF TOBACCO AND STIMULANTS.—In response to a circular recently sent out by Mr. Arthur Reade, who has been collecting information as to the habits of literary men in regard to stimulants, the Abbé Moigno gives the following record of his experiences. In his paper, *Les Mondes*, he states that he has published 150 volumes, small and great; that he scarcely ever leaves his work-table, and never takes walking exercise; yet he never has a trace of headache, or brain-weariness, or constipation, or any form of urinary troubles, etc. He never has recourse for his work to stimulants, coffee, alcohol, tobacco, etc., a

statement which the sequel shows to need qualification. Snuff-taking he has sometimes practised, but he vigorously condemns it. He has learnt twelve foreign languages by a method of his own, and with regard to his acquirements in philology and chronology, he says, 'I was one of the most extraordinary personalities of my time, and François Arago sometimes laughingly threatened to have me burnt as a sorcerer.' On one occasion, when in Munich for a few weeks, and spending his evenings with Bavarian *savants*, who each smoked four or five cigars and drank two or three pots of beer daily (Steinheil, the most illustrious, boasted of smoking 6,000 cigars a year), the Abbé came to smoke three or four cigars a day. He had also anew taken to snuff, so that, when preparing his calculus of variations, a very difficult mathematical work, he would empty his snuff-box (which held 25 grammes) in a day. But one day he was surprised to find himself painfully unable to recall the meaning of foreign words, and remember dates with which he had been familiar. Thereupon he formed a heroic resolution, and since August 31, 1863, when he smoked three cigars and took 25 centimes' worth of snuff, he has, up to the 25th of June, 1882, touched neither. This was, for him, a complete resurrection, not only of memory, but of general health and well-being; he has had indefinite capacity of work, unconscious digestion, perfect assimilation of food (of which he can take more), etc. For the rest, he mentions that he takes a small cup of black coffee in the morning, and when all but two or three spoonfuls has been drunk, he adds a small spoonful of brandy or other alcoholic liquor. This is his ration of stimulants. He goes to bed about nine, and rises at five, 'full of vigour'. The Abbé is over 80.

ON THE DIFFERENT ACTION OF CARBOLIC OIL AND CARBOLISED WATER.—In the communications by the Imperial Board of Health, 1881, Band i, Wolffnigel and Von Knorre give their results arrived at in solving the above question. Every disinfectant must penetrate to the very furthest crevices of the material to be disinfected, in so far as germs are capable of penetrating, at least, and must enter the micro-organisms in such a manner as to be capable of causing their destruction to the extent that the strength of the germicide demands. In regard to the first of these requirements, it is theoretically to be assumed that an aqueous solution of carbolic acid would suit it better than an oily one, inasmuch as in practice the greater number of cases requiring disinfection are those in which we have to deal with water-containing material, which is easier penetrated by water than by oil. Another point, however, requires to be considered. Since carbolic acid is soluble in water as well as in oil, it might be argued, in spite of said theoretical assumption, that, in the case of carbolic oil, a sufficient disinfection took place by the carbolic oil giving off its acid to the water of the material to be disinfected. Experiments, with a view to prove this argument, were carried out, inasmuch as solutions of carbolic acid in water were brought in contact with olive oil, and carbolised oil brought in contact with distilled water, with and without the intervention of membranes, and the constant result was that the olive oil took up carbolic acid from watery solutions more readily, to a high degree, than the water took up acid from carbolised oil, a fact which is in perfect harmony with the one that carbolic acid is soluble in oil to an indefinite degree, whilst in water 1 in 20 is the maximum of solubility. Even though, in the above experiments, the second requirement has been neglected, a physico-chemical view has been formed which is suitable to the explanation of Koch's dictum, that carbolic oil is far behind an aqueous solution, equal in strength, as a disinfectant. Practically, we arrive at the result that the use of carbolic oil is unsafe when we wish energetically to disinfect; furthermore, that its use in surgery and midwifery is questionable.

The London Medical Record.

The Publishers of the LONDON MEDICAL RECORD invite offers of back volumes or sets of this periodical.

GREAT BRITAIN AND IRELAND.

MEDICAL QUALIFICATIONS.

THE number of examining bodies in the United Kingdom which grant degrees and diplomas capable of registration under the Medical Act of 1858 is nineteen. The registrable qualifications obtainable from them are as follows.

1. *Royal College of Physicians of London*: Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England*: Diplomas of Member and Fellow.
3. *Apothecaries' Society of London*: Licence.
4. *University of Oxford*: Degrees of Bachelor and Doctor of Medicine.
5. *University of Cambridge*: Degrees of Bachelor and Doctor of Medicine, and Bachelor and Master in Surgery.
6. *University of London*: Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham*: Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
8. *Royal College of Physicians of Edinburgh*: Diplomas of Licentiate, Member and Fellow.
9. *Royal College of Surgeons of Edinburgh*: Diplomas of Licentiate and Fellow.
10. *Faculty of Physicians and Surgeons of Glasgow*: Diplomas of Licentiate and Fellow.
11. *University of Aberdeen*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
12. *University of Edinburgh*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
13. *University of Glasgow*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
14. *University of St. Andrew's*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
15. *King and Queen's College of Physicians in Ireland*: Diplomas of Member, Licentiate, and Fellow, and Licentiate in Midwifery.
16. *Royal College of Surgeons of Ireland*: Diplomas of Licentiate and Fellow.
17. *Apothecaries' Hall of Ireland*: Licence.
18. *University of Dublin*: Licences in Medicine and in Surgery; Degrees of Bachelor and Doctor of Medicine, and Bachelor and Master in Surgery.
19. *Royal University in Ireland*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery; and a Special Diploma in Obstetrics.

In addition, the Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists' Act.

Certificates and diplomas in State Medicine and Public Health (which at present are not registrable) are conferred after examination by the Universities of Cambridge, London, Durham, Edinburgh, Glasgow, and Dublin; by the Royal University of Ireland; and by the Royal College of Physicians in Edinburgh.

The following is a general summary of the conditions required on the part of candidates for examination; but, for further details, our readers must consult the regulations issued yearly in the Student's numbers of our contemporaries; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised:—1. The possession of a degree in Arts of an University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the 'Recommendations of the General Medical Council'. No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the following subjects of general education. 1. English Language, including Grammar and Composition; 2. English History; 3. Modern Geography; 4. Latin, including Translation from the Original, and Grammar; 5. Elements of Mathematics, comprising (a) Arithmetic, including Vulgar and Decimal Fractions; (b) Algebra, including Simple Equations; (c) Geometry, including the first two books of Euclid, or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics (this subject may be passed either as preliminary, or before, or at the first professional examination); 7. One of the following optional subjects: (a) Greek, (b) French; (c) German; (d) Italian; (e) Any other modern language; (f) Logic; (g) Botany; (h) Elementary Chemistry. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Forms for registration are supplied by the licensing bodies and at the schools and hospitals.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the Licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The minimum period of medical study required is forty-five months from the date of registration as a student, of which time at least two years and a half

must be passed at a recognised medical school. For the degrees of the Universities (except that of London and the Royal University in Ireland) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a College in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed; first in the elementary subjects—Chemistry, Anatomy, Physiology, and *Materia Medica*; and afterwards in the practical subjects. The final examination, which must not be passed until the completion of the fourth year of study, comprises:—1. Pathology (including Morbid Anatomy); 2. Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); 3. Surgery (including Surgical Anatomy and Clinical Surgery); 4. Midwifery; 5. Forensic Medicine.

Special arrangements exist at the Universities of Durham and St. Andrew's for granting degrees to practitioners of medicine above forty years of age.

INSTRUCTION IN THE MEDICAL SCHOOLS.

THE medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, the Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England, there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne; the Medical School affiliated to University College, Bristol; the Medical Faculty of University College, Liverpool (Royal Infirmary School of Medicine); together with medical schools at Leeds and Sheffield. The Universities of Oxford and Cambridge do not profess to give a complete education; but instruction in many branches is provided for at Cambridge.

In Scotland, the medical schools in which a complete course of professional education is given, are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow; the Extra-Academical School in Edinburgh; and Anderson's College, the Royal Infirmary School of Medicine, and the Western School of Medicine, in Glasgow.

In Ireland, the medical schools are, the School of Physic in Ireland, the School of the Royal College of Surgeons of Ireland, and the Colleges at Belfast, Cork, and Galway. There are also several medical schools in Dublin: viz., the Carmichael College of Medicine and Surgery, the Catholic University, and the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction; Practical Surgery; Special Departments; Practical Physiology; Hospital Appointments; Tutorial Instruction; and Scholarships, Exhibitions, and Prizes.

CLINICAL INSTRUCTION.—At all the hospitals connected with medical schools the physicians and surgeons deliver, at stated intervals, lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is also made by the appointment of one or more of the hospital staff as clinical professors or lecturers; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, forty patients are set aside in the medical wards, and are visited and their cases lectured on by the physicians in the winter, and by the assistant-physicians in the summer session: the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards are devoted to the express purpose of teaching clinical medicine; the cases being lectured on by the physicians in the winter, and by the physicians or assistant-physicians in the summer. Special clinical professorships in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical medicine is Dr. George Johnson, and the professors of clinical surgery are Mr. John Wood and Mr. Lister. In University College Hospital there are two special chairs, known as the 'Holme Professorships' of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Wilson Fox, who delivers clinical lectures, on Tuesdays and Thursdays, on the significance of the general signs of disease, and on the special modes of examination, diagnosis, and treatment of individual cases. There are also two assistant teachers of clinical medicine, Dr. Gowers and Dr. Barlow, who hold classes for instruction in physical examination, the investigation of diseases of the circulatory, respiratory, and nervous systems, the examination of the urine, etc. The Holme professor of clinical surgery, Mr. Christopher Heath, gives a clinical lecture once a week, and also holds a weekly clinical examination on surgical cases in the operating theatre; these examinations, while open to the whole class, being specially intended for the instruction of the senior students. Mr. Marcus Beck and Mr. A. E. Barker are assistant-professors of clinical surgery. A special course of lectures on Clinical Surgery has been established at St. Thomas's Hospital, the lecturer being Mr. John Croft. In Cambridge, clinical instruction in medicine and surgery is given at Addenbrooke's Hospital throughout the year. At Leeds, clinical classes meet at appointed hours to receive instruction, in the wards, from the physicians. In the Liverpool Royal Infirmary, Dr. Glynn, one of the physicians, gives, once a week during the winter, practical instruction in clinical medicine and the methods of physical diagnosis. Two Clinical Tutors, in the Medical and Surgical Wards, have also been appointed. In the Owens College, Manchester, there is a special professorship of clinical medicine, held by Dr. William Roberts. A medical and a surgical clinical lecture are given every week in the Manchester Royal Infirmary. Medical and Surgical Ward Classes are formed by the members of the Infirmary staff at each of the trimestral periods, commencing with October, January, and May. In the Infirmarys of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medicine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors

of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, a course of practical medicine will be given by Dr. M. Lubbock. It will include the methods of examining organs, the examination of morbid products, case-taking, the management of the sick-room, etc. At St. George's Hospital, a similar course will be given by Dr. Whipham. In Guy's Hospital, the ward clerks (of whom 150 or more are appointed during the year) are assisted in the examination of cases and the preparation of reports by the medical and surgical registrars, who also instruct them in physical diagnosis and in chemical and microscopical investigation. Similarly, at the London Hospital, the clinical clerks and dressers are assisted by the house-physicians and house-surgeons. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision made at University College Hospital has been referred to above. Classes for medical demonstration are held in the Manchester Royal Infirmary twice weekly during the summer by two of the medical officers; in which classes instruction is given in anatomy as applied to medicine, in physical and chemical examination, etc. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by the clinical tutor.

PRACTICAL SURGERY.—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as—the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in many instances given in the summer session. In the Liverpool School of Medicine, the lectures on Systematic Surgery are given thrice weekly, and there is a concurrent course of Practical Surgery twice weekly; besides which, a course of Operative Surgery is given in the summer.

SPECIAL DEPARTMENTS.—Due provision is made for both theoretical and practical instruction in *Midwifery and Diseases of Women*, so as to enable students to meet the requirements of the examining bodies.

Ophthalmic Surgery is taught by lectures and observation of cases at all the London schools; each hospital receiving ophthalmic patients except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 50 beds (also about 3,000 out-patients, and an average of more than 1,800 operations); London Hospital, 12 beds.

The other hospitals have beds for ophthalmic cases, but the number is not stated. Provision for teaching ophthalmic surgery, theoretical and practical, is made in the provincial schools. In the Universities of Aberdeen and Glasgow, instruction in ophthalmic surgery is given; and the students are admitted to see the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in the Schools of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland, provision is made for the teaching of ophthalmic surgery in most of the medical schools.

Aural Surgery is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Bristol, Manchester, and Newcastle Royal Infirmaries among the provincial schools; also in the Extra-academical School in Edinburgh, and in Anderson's College and the Royal Infirmary School of Medicine in Glasgow.

Diseases of the Throat.—Special instruction in the diagnosis and treatment of diseases of the throat and larynx, and the use of the laryngoscope, is given at St. Bartholomew's Hospital by Mr. Butlin; at King's College Hospital by Dr. Curnow; at the London Hospital by Dr. Morell Mackenzie, who delivers a course of lectures on the subject; at St. Mary's Hospital by Mr. Norton; at the Middlesex Hospital by Mr. Hensman (with Diseases of the Ear); at St. Thomas's Hospital by Dr. Semon; at University College Hospital by Dr. Poore; at the Westminster Hospital by Dr. De Havilland Hall; at the Bristol Royal Infirmary by Mr. Harsant; at the Manchester Royal Infirmary by Dr. H. Simpson; at the Newcastle-on-Tyne Infirmary by Dr. Hume (with Diseases of the Ear); and in the Glasgow Royal Infirmary by Dr. E. Watson.

Diseases of the Skin.—For the teaching of this important department of medicine, special provision is made in all the London Hospitals, in the Bristol General Hospital, in the Manchester Royal Infirmary, and in the Newcastle-on-Tyne Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, Dr. Radcliffe Crocker, the physician in this department, gives clinical lectures on diseases of the skin once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

Orthopædic Surgery is taught at St. Bartholomew's Hospital by Mr. Walsham; at St. George's Hospital by Mr. W. H. Bennett; and at the Westminster Hospital by Mr. Richard Davy. Mr. Hardie gives instruction on this subject at the Manchester Royal Infirmary.

Mental Diseases.—Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances; thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, and those of the London Hospital to Bethnal House. Two students of the London Schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Dr. Major, the Medical Director, gives clinical lectures in addition to a course of systematic lectures at the school. In Manchester, a course of clinical lectures on mental

diseases is given to senior students of Owens College by Mr. G. W. Mould, at the Asylum in Cheadle. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Mr. Wickham, medical superintendent of Coxlodge Asylum. In the University of Edinburgh, Dr. Clouston gives a course of Medical Psychology and Mental Diseases, with practical instruction at the Morningside Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow Royal Infirmary School of Medicine, a course of lectures on Mental Diseases is given by Dr. A. Robertson, in the City Parochial Asylum. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1,000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

Public Health.—Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex and St. Thomas's Hospitals, and at King's College. At St. George's Hospital, it is included in the Course of Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food, is given in the hygienic laboratory. In most of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on hygiene are delivered by Dr. Ransome. A course of lectures is given in the Newcastle College of Medicine by Dr. Armstrong. In Scotland, also, the instruction in Public Health is given in connection with the lectures on Medical Jurisprudence. In Dublin, there is a professorship of Hygiene in the school of the Royal College of Surgeons.

PRACTICAL PHYSIOLOGY AND HISTOLOGY.—This subject is taught in all the schools: but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course is conducted by a demonstrator and two assistant demonstrators under the superintendence of the lecturers on Physiology and Chemistry. Dr. Klein gives a course of lectures on General Histology, with demonstrations, which form part of the course on General Anatomy and Physiology.

At *Guy's Hospital*, Mr. Golding-Bird gives a course of Histological demonstrations of the elementary tissues and the chief organs of the body, with their behaviour and re-agents, as studied with the microscope. The course includes about thirty-five demonstrations, and is gone through twice in the winter session. A laboratory class in Practical Physiology, intended for advanced students, is held by Dr. Pye-Smith in the summer.

At *University College*, instruction in Practical Physiology is given by Dr. Burdon Sanderson (Jodrell Professor of Physiology) and Mr. Schäfer (Assistant Professor of Physiology). The course of Practical Physiology and Histology consists of practical lessons in Histology and the use of the Microscope, and in Chemical Physiology. A course of lectures on Embryology will be given during the winter session. In addition, a series of practical lessons on development will be given to those who have been through the course of Practical Histology.—Persons desirous of engaging in original investigation in Physiology and Histology may be admitted

to the laboratory as workers on the nomination of the Jodrell Professor. An advanced course of practical Physiology, specially adapted to meet the requirements of candidates for honours at the Examinations of the University of London, is given after Christmas.

At the *Westminster Hospital*, a course of lectures and demonstrations will be given by Mr. North. The course will consist of three parts—Lectures and demonstrations on the Histology of the Simple Normal Tissues, delivered during May, June, and July; 2. Lectures and demonstrations on the Histology of the Normal Organs and Viscera, delivered in October, November, and December.

In *Owens College, Manchester*, a very complete course of practical Physiology is conducted during the year by Dr. Arthur Gamgee, the Brackenbury Professor of Physiology. The class meets daily, except Saturdays, for systematic work in Practical Histology and Physiological Chemistry, and for demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions.

Practical Physiology is taught in the University of Edinburgh, by Professor Rutherford; in that of Aberdeen, by Professor Stirling; and in that of Glasgow, by Professor Fleming. Courses are also given in the Edinburgh Extra-Academical School; and in the Royal Infirmary School of Medicine, in Anderson's College, and in the Western Medical School, in Glasgow.

HOSPITAL APPOINTMENTS.—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, four house-physicians and ten house-surgeons are appointed annually. A resident midwifery assistant is appointed every six months; an ophthalmic house-surgeon is also appointed for six months, and may be re-elected. A senior and a junior assistant-chloroformist are appointed annually. Each of these officers is provided with rooms by the hospital authorities, and receives an annual salary of £25. Clinical clerks to the medical in-patients, and to the physician-accoucheur, also clerks and dressers for the out-patient and special departments, are chosen from among the students. Forty dressers for the surgical in-patients and the surgical casualty department are selected each year; and other in-patient dresserships may be obtained on payment of £10 10s. for three months, or £16 16s. for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar are appointed, each with a salary of £40 a year. A resident medical officer, a resident surgical officer, a resident obstetrical officer, an assistant medical officer, and an assistant surgical officer, are appointed every six months, after examination, preference in each case being given to a legally qualified man. The clinical clerks—three to each physician, and two to each assistant-physician, and the dressers—three to each surgeon and assistant-surgeon, and also two clinical clerks to the physician-accoucheur, are appointed for periods of four months. Pathological assistants, who assist at the *post mortem* examinations, are appointed each month for four months.

At *St. George's Hospital*, house-physicians and

house-surgeons are appointed half-yearly from among the perpetual pupils. The appointments are held for twelve months, with board and residence in the hospital, free of expense. Each pays a deposit of 50 guineas, which is returned if the duties of his office have been satisfactorily performed. A curator of the Pathological Museum and a medical and a surgical registrar, each with a salary of £50; an ophthalmic registrar and a microscopic pathologist, each with a salary of £25; and an obstetric assistant, with board, residence, and a salary of £100, are appointed annually. An assistant house-physician, an assistant house-surgeon, an ophthalmic assistant, two assistant medical registrars, and an assistant surgical registrar, are appointed every six months. Clinical clerks and dressers are also appointed.

At *Guy's Hospital*, there are appointed during the year 6 senior and 6 junior house-physicians, 6 senior and 6 junior house-surgeons, 12 senior and 12 junior obstetric residents, 24 surgeons' dressers, 18 clinical assistants, 18 dressers in the eye wards, 24 *post-mortem* clerks, 24 obstetric out-patient clerks, 32 assistant physicians' clerks, 12 dental surgeons' dressers, 12 aural surgeons' dressers, 64 medical clinical clerks, 72 or more assistant-surgeons' dressers and dressers in the surgery, 12 obstetric ward clerks, 80 surgical clinical clerks, 32 assistant-surgeons' clerks, 60 extern obstetric assistants, and clerks in the room for applying electricity. All students have opportunities of becoming clinical ward clerks to the physicians and surgeons, as well as dressers to the assistant-surgeons, and dressers in the surgery; and the diligence with which they perform the duties of these offices is an important test of their fitness for the higher posts.

At *King's College Hospital*, a physician's assistant, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers, are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, every student is expected to act as clinical clerk to the medical out-patients for six weeks in his second year, and to dress for three months in the surgical out-patient department; also to act as *post-mortem* clerk for three months. The following appointments are also made: five house-physicians (qualified for registration) every six months; clinical clerks (open to all full pupils) every three months; a resident accoucheur (qualified) every six months; clinical obstetric clerks every three months in the in-patient, and every six weeks in the out-patient department; five house-surgeons, for six months (each being provided with board and residence); surgical dressers every three months; three clinical assistants (each with a salary at the rate of £80 *per annum*); a medical and a surgical registrar (each with £100 *per annum*); a dental assistant, ophthalmic and aural dressers, and *post-mortem* clerks.

At *St. Mary's Hospital*, four resident medical officers are appointed for twelve months, and a resident obstetric officer for six months. They all reside in the hospital, free of expense. All students are required to perform the duties of clinical clerk and dresser for eight months after passing the primary examination. Students of the third year are expected to assist in the out-patient department for three months.

At the *Middlesex Hospital*, two house-surgeons, six resident physicians' assistants, and a resident obstetric physician's assistant are appointed by competitive examination. They pay on appointment, fees

varying from ten to twenty guineas, according to circumstances. The appointments of clinical clerks and dressers are so arranged that every student may, at some period of his attendance on hospital practice, hold both a clerkship and a dressership. Obstetric physician's clerks and ophthalmic dressers are appointed.

At *St. Thomas's Hospital*, two resident and one non-resident house-physicians, an assistant house-physician, two house-surgeons, an assistant house-surgeon, and a resident accoucheur, are selected every three months from gentlemen who have obtained professional diplomas. An ophthalmic clinical assistant is also appointed with a salary of £50 *per annum* for six months. Clinical clerks and dressers to in-patients are selected from pupils, to the number in all of at least 100 each year; and clinical clerks and dressers to out-patients to the number of 80 or 100 each year. Two registrars, at an annual salary of £100 each, are appointed each year. There are also numerous minor appointments of anatomical assistants, prosectors, obstetric clerk, etc., open to all students.

In *University College Hospital*, eight house-physicians, six house-surgeons, and four obstetric assistants, are selected annually by examination from among the senior students. They reside in the hospital, paying for their board. Out-patient physicians', and surgeons' assistants, clinical clerks, surgeons' dressers, and ophthalmic surgeon's assistants, are selected from among the pupils who are also students of the College.

At the *Westminster Hospital*, a curator of the museum, and pathologist, with a salary of £52 10s., and a medical and a surgical registrar, each with a salary of £40, are appointed annually. Two house-physicians, a house-surgeon, and a resident obstetric assistant, are appointed by examination for six months; they are provided with board and rooms in the hospital, and the senior house-physician, as chloroformist, receives and additional honorarium of £21. An assistant house-surgeon is appointed by examination. Clinical assistants to the assistant-physicians and assistant-surgeons, and to the officers in charge of special departments are appointed from among the most advanced students of the fourth year. Every student must act as out-patient dresser during three months in his first year, and afterwards hold the office of in-patient dresser and clinical clerk during a period of three months each.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant, and two resident dressers, are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months and a resident dresser every three months.

At the *Bristol Royal Infirmary*, students are appointed to clinical clerkships in their third and fourth years. Surgeons' dressers are appointed after the first year of study, and, when sufficiently qualified, reside in the hospital in weekly rotation, and act under the supervision of the house-surgeon. The dressers and clinical clerks pay fees in addition to those for hospital practice; the former £5 5s. for each six months, the latter £5 5s. for six months, or £8 8s. for a year. Obstetric clerks pay £3 3s. for three months. A pathological clerk is appointed every four months.

At the *Bristol General Hospital*, clinical clerks, dressers, and obstetric clerks are appointed. The clinical clerks and dressers pay each an extra fee of £5 5s. for six months; and the obstetric clerks

£3 3s. for three months. The dressers reside in the hospital in rotation, free of expense.

In the *Leeds General Infirmary*, all students must hold the office of clinical clerk and dresser. A house-physician and house-surgeon are elected from time to time. There are four resident assistants; two are elected every six months, and hold office for one year.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are selected (by competitive examination if necessary) from pupils of the school who have obtained a legal qualification to practice; they hold office for six months. Three clinical clerks are appointed to each physician, and three or more dressers to each surgeon, and two clerks to the wards for special diseases of women; they hold office for three months. *Post mortem* clerks are appointed for periods of six weeks. This appointment is required to be held by every student.

At the *Manchester Royal Infirmary*, a registrar, a pathological registrar, and two assistant medical officers, are appointed annually, each with a salary of £100. The following resident medical officers are appointed: at Infirmary, for two years, salary, £250 *per annum*; at Cheadle Lunatic Asylum, for one year, £150 *per annum*; at Monsall Fever Hospital, for one year, £200 *per annum*. A resident surgical officer is appointed annually, and receives £150. Eight house-surgeons, and four house-physicians are appointed in each year. An assistant to the resident medical officer at Monsall, and one at Cheadle, are appointed every six months. House-surgeons must possess registrable qualifications. Two or more clinical clerks are attached to each physician and assistant-physician, and two or more dressers to each surgeon and assistant-surgeon; two clerks are also appointed to the pathological registrar and to each of the assistant medical officers. They hold these for three months. Accident-room dressers are also appointed monthly, for two months.

In the *Newcastle-on-Tyne Infirmary*, four times in the year, two resident medical assistants, two resident surgical assistants, three non-resident clinical clerks, and sixteen dressers, are appointed for three months. Assistants in the pathological department and to the dental surgeon are also appointed.

In the *Edinburgh Royal Infirmary*, resident physicians and resident surgeons are appointed for six months. Clinical clerks are also appointed; and each surgeon appoints several dressers for six months. There are also assistants in the pathological department.

In the *Glasgow Royal Infirmary*, five physicians' and five surgeons' assistants are boarded and lodged in the Hospital at the rate of £25 *per annum*. The appointments can be held for twelve months, six in the medical and six in the surgical wards. These appointments are open to students who have passed all their examinations except the last, or to qualified gentlemen. There are also numerous clerkships and dresserships.

TUTORIAL INSTRUCTION.—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or (as at St. George's Hospital) within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases (as at St. Bartholomew's and the London Hospitals) awarded after examination in subjects of preliminary education; but in most of the schools they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

FRANCE.

GRADUATION IN MEDICINE.

THE Degree of Doctor in Medicine of the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the Government.

1. The studies necessary for obtaining the degree last four years; during the first three years they may be carried on either in the Faculties, in the *Ecoles de plein exercice*, or in the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be made in a Faculty or in an *Ecole de plein exercice*.

2. Candidates must produce, when they take the first inscription, the diploma of Bachelor of Sciences, limited as regards the mathematical part. They must undergo five examinations and defend a thesis. The second, third, and fifth examinations are each divided into two parts.

3. The five examinations are as follow. *First Examination*: Physics, chemistry, medical natural history. *Second Examination*: First part, anatomy and histology; second part, physiology. *Third Examination*: First part, external pathology (surgery), midwifery, operative surgery; second part, internal pathology (medicine), general pathology. *Fourth Examination*: Hygiene, legal medicine, therapeutics, materia medica, and pharmacology. *Fifth Examination*: First part, clinical surgery and obstetrics; second part, clinical medicine, practical demonstrations in pathological anatomy; and a thesis on a subject chosen by the candidate.

4. The first examination takes place after the fourth inscription and before the fifth; the first part of the second examination, after the tenth inscription, and before the twelfth; and the second part after the twelfth inscription and before the fourteenth. The third examination cannot be passed until the end of the sixth *trimestre* of study. Any candidate who does not pass the first examination in November, at the latest, will be put back to the end of the scholastic year, and will not be permitted to take out any inscription during the course of that year.

5. Candidates for the doctorate, pupils of *écoles de plein exercice* or of the preparatory schools, are examined by the Faculties at the periods fixed in the preceding article. They may, however, defer the first examination until after the twelfth inscription. In that case they must pass the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are subjected to interrogations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

6. The inscriptions for *officier de santé* cannot be converted into inscriptions for the doctorate, in the case of pupils actually studying; but this conversion may be permitted in the case of *officiers de santé* who have practised medicine for at least two years.

7. Practical work in the laboratory, dissection, and residence near the hospitals, are obligatory. Each annual period of laboratory work and dissection comprises a six months' course, or *semestre*. Residence near the hospitals must not continue less than two years.

8. The fees to be paid by candidates for the degree of Doctor in Medicine are fixed as follows.

Sixteen inscriptions at 32 francs 50 centimes each	...	...	520 francs.
Eight examinations at 30 francs	...	...	240 "
Eight certificates of proficiency at 25 francs	...	...	200 "
Expenses of materials for practical study, first year, 60 francs; second and third years, each 40 francs; fourth year, 20 francs	...	...	160 "
Thesis	...	...	100 "
Certificate of proficiency	...	...	40 "
Diploma	...	...	100 "
Total	...	...	1,360 "

9. Every candidate, who, without an excuse admitted by the jury, does not answer when his name is called, on the day of which notice has been given to him, is set back for three months, and forfeits the fees which he has paid.

10. The fees paid by the pupils of the Faculties go to the public treasury. The fees paid for inscriptions and for practical work by the pupils of the *écoles de plein exercice* and the preparatory schools go to the municipal treasuries.

A foreigner holding medical qualifications to practise medicine, if desirous of obtaining the degree of the University of France, must show to the Minister of Public Instruction his diploma, and the certificates of the course of study which he has undergone in his own University or Medical School. The Minister, if satisfied, will authorise the candidate to present himself for the five final examinations. These are conducted in the French language. The fees are as follows: each examination 90 francs = 450 francs;

thesis, 240 francs; fifteen inscriptions, 520 francs; three *examens de fin d'année*, 90 francs; diplomas of *bachelier ès lettres et ès sciences*, 100 francs; in all, 1,400 francs. The candidate has to pay all the fees, although exempted from the necessity of passing the preliminary examinations, and those for the *bachelier ès lettres et ès sciences*.

MEDICAL EDUCATION.

Medical Education in France is under the control of the State, and is given in the Faculties of Medicine and Pharmacy, the *Écoles de Plein Exercice*, and the Preparatory Schools of Medicine and Pharmacy.

The Faculties are six in number: three—those of Paris, Montpellier, and Nancy, are composed of two distinct schools of Medicine and Pharmacy; the others, at Bordeaux, Lille, and Lyons, are called mixed Faculties of Medicine and Pharmacy. They confer, besides the same diplomas and certificates as the other schools, the diplomas of doctor in medicine and *pharmacien* and midwife of the first class.

There are two *écoles de plein exercice*, viz., at Nantes and at Marseilles. They are entitled to give the same certificates as the preparatory schools; but candidates for the doctorate may take out sixteen inscriptions in them.

The Preparatory Schools are entitled to give diplomas or certificates of *Officier de santé et Pharmacien*, herbalist, or midwife, of the second class. Candidates for the doctorate can study in them three years, and take out twelve inscriptions. There are preparatory schools at Algiers, Amiens, Angers, Arras, Caen, Clermont, Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, Toulouse, and Tours.

FACULTY OF MEDICINE IN PARIS.

The School of Medicine in Paris is open to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 30 francs or more is expected from each student.

The medical sessions begin for winter on October 15th, and for summer on April 15th of each year.

The instruction in the Faculty of Medicine in Paris is given by the following professors: M. Sappey, Anatomy; M. Robin, Histology; M. Bérclard and M. Richet (*agrégé*), Physiology; M. Wurtz and M. Henninger (*agrégé*), Medical Chemistry; M. Baillon and M. de Lanessan (*agrégé*) Natural History; M. Gavaret and M. Gariel, Medical Physics; M. Regnaud, Pharmacology; M. Jaccoud, M. Peter, and M. Dieulafoy (*agrégé*), Internal Pathology or Medicine; M. Trélat and M. Berger (*agrégé*), External Pathology or Surgery; M. Guyon, Surgical Pathology; M. Le Fort, Practical Surgery; M. Hayem, *Materia Medica* and Therapeutics; M. Charcot and M. Ollivier (*agrégé*), Pathological Anatomy; M. Pajot and M. Pinard (*agrégé*), Midwifery; M. Bouchardat, Hygiene; M. Brouardel, Forensic Medicine; M. Bouchard, General Pathology and Therapeutics; M. Vulpian, Comparative and Experimental Pathology; MM. G. Sée, Lasègue, Mardy, Potain, Clinical Medicine; MM. Gosselin, Richet, Verneuil, Trélat, Clinical Surgery; M. Depaul, Clinical Midwifery; M. Panas, Clinical Ophthalmology; M. Parrot, Diseases of Children; M.

Laboulbène, History of Medicine; M. Ball, Diseases of the Mind and Nervous System. Supplementary courses are also given on Diseases of the Skin, Diseases of Children, Venereal Diseases (M. Fournier).

The Faculty of Medicine possesses laboratories for Anatomy (Professor Sappey), Operative Surgery (Professor Le Fort), Physics (Professor Gavarret), Chemistry (Professor Wurtz), Biological Chemistry (Professor Wurtz), Practical Forensic Medicine (Professor Brouardel), Botany (Professor Baillon), and Teratology (Director, M. Dareste), Normal Histology (Director, M. Ch. Robin), Physiology (Professor Bédard), Pathological Anatomy (Professor Charcot), Experimental and Comparative Pathology (Professor Vulpian), Therapeutics (Professor Hayem), Pharmacology (Professor Regnaud).

In consequence of limited accommodation and restricted pecuniary means, these laboratories are, as a rule, incapable of being so useful as such institutions might be expected to be. It is found necessary to limit their use to medical men and to students who are pursuing researches for some definite purpose, such as the preparation of their theses. No payment is required; the demonstrators (*préparateurs*) aid with advice; the apparatus is at the disposal of the workers in the laboratories, but they generally have to pay for any animals or other objects which they may require.

Every student is required to go through courses of practical instruction (*travaux pratiques*) as follows: first year, physics, chemistry, and natural history; second and third years, anatomy, physiology, and histology; fourth year, practical surgery and pathological anatomy.

Attached to the Faculty of Medicine are the Botanical Gardens and Museum of Natural History; the Orfila Museum of Anatomy and Zoology, at the École de Médecine; the Depuytren Museum of Pathological Anatomy, in the École Pratique; and the Library.

The prizes of the Faculty of Medicine are the following. The Corvisart prize, a gold medal of the value of 400 francs (£16) is offered for competition to all pupils of the Faculty who have also entered to one of the internal clinics. The subject is some question in medicine, the answer to which must be derived exclusively from the facts observed in hospital practice. The Monthyon prize, consisting of 700 francs (£28), is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 francs (£80) is offered annually to the inventor of an operation, or of instruments, bandages, etc., of general utility and superior to anything of the kind that has been already in use. The Chateaufillard prize, also of 2,000 francs, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 in the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 francs (£40) is awarded, under the will of the late Baron de Frémont, to a meritorious but poor student. An annual revenue of 3,000 francs, bequeathed by Madame de Barkow, is applied to a similar purpose in the superior educational establishments in Paris. The Lacaze prize of 10,000 francs (£400) is offered biennially for the best essay on phthisis or on typhoid fever—the subjects being taken alternately. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinc-

tion, in the form of silver medals, bronze medals, and honourable mention. Bursaries of the value of 1,200 francs are awarded after competition. Each bursary is tenable for one year; and the holder, if desirous of its renewal, must again compete. Candidates must be natives of France, at least eighteen years of age.

THE COLLEGE OF FRANCE.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard; General Anatomy, by M. Ranvier; Natural History of Organised Bodies, by M. Marey; Comparative Embryogeny, by M. Balbiani; Organic Chemistry, by M. Berthelot; Mineral Chemistry, by M. Schützenberger; Physics, by M. Mascart; Natural History of Inorganic Bodies, by M. Fouqué; General Physics, by M. Bertrand. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François Franck, is open to persons who enter their names for the purpose with the secretary of the Faculty of Sciences, and who have a sufficient knowledge of physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology; but special attention is paid in this laboratory by the phenomena of motion, and their registration by suitable apparatus.

FREE MEDICAL INSTRUCTION.

In addition to the professors in the Faculty of Medicine, there are a number of lecturers whose instruction is recognised. Among them are, MM. Lenoir and Fort, for Anatomy; M. François Franck, for Physiology and Pathology; M. Dareste, for Embryology and Teratology; Dr. Latteux, for Histology and the Use of the Microscope; MM. Moutard-Martin, Hanot, Barié, Cuffer, du Castel, Lorey, and Muselier, for Internal Pathology; MM. Duret and Schwartz, for External Pathology; MM. Ribemont, Champetier de Ribes, and Porak, for Midwifery; MM. de Sinéty, Chéron, and Berrut, for Diseases of Women; MM. Abadie, Carré, Coursierant, Desmarres, Fano, Galezowski, Meyer, Parinaud, and Gorecki, for Diseases of the Eyes; MM. Fauvel and Cadier, for Laryngoscopy; M. Gellé, for Diseases of the Ears; MM. Reliquet, Mallex, Picard, Debuc, and Langlebert, for Diseases of the Urinary Passages; MM. Apostoli and Tripier, for Medical Electricity.

THE HOSPITALS OF PARIS.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any of the hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8 or 9 A.M. The following is a list of these institutions:

Hôtel Dieu, Parvis Notre Dame.—530 beds. *Physicians*: Drs. G. Sée, Hérard, Oulmont, Frémy, Moutard-Martin, and Empis; *Surgeons*: MM. Richet, Cusco, and Panas (Diseases of the Eye). The hospital possesses laboratories for histology, chemistry, and physiology; also a library for the use of the *internes*.

Hôpital des Cliniques, 13, Rue Monsieur-le-Prince; for Midwifery, 89, Rue d'Assas.—128 beds. *Physician Accoucheur*: Dr. Depaul; *Superintendent of Clinic*: M. Ribemont. Students are only admitted

to the] obstetric department of this hospital when provided with a card, which is obtained from the Secretary of the Faculty of Medicine, after passing the second examination for the doctorate.

Hôpital de la Charité, 47, Rue Jacob.—504 beds. *Professor of Clinical Medicine*: M. Hardy; *Professor of Clinical Surgery*, M. Gosselin; *Physicians*: Drs. Reynaud, Vulpian, Laboulbène, Desnos, and Bernutz (Obstetric). The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1, Rue Lacépède.—709 beds. *Physicians*: Drs. Lancereaux, Gallard, Peter, Dumontpallier, Lasègue, and Brouardel; *Surgeons*: MM. Verneuil and Polaillon.

Hôpital Lariboisière, Rue Ambroise Paré.—706 beds. *Physicians*: Drs. Fernet, Jaccoud, Bouchard, C. Paul, Proust, and Siredey; *Surgeons*: MM. Duplay (Diseases of the Eye) and Labbé. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

Hôpital Saint-Antoine, 184, Rue de Faubourg Saint-Antoine.—647 beds. *Physicians*: Drs. Mesnet, Dujardin-Beaumetz, Rigal, Cornil, Hayem, d'Heilly, and Duguët; *Surgeons*: MM. B. Anger and Périer.

Hôpital Necker, 151, Rue de Sèvres.—418 beds. *Physicians*: Drs. Potain, Blachet, and Ollivier; *Surgeons*: MM. Trélat and Guyon. The Cuvier museum, containing numerous calculi and specimens of diseases of the urinary organs, is attached to the hospital.

Hôpital Beaujon, 208, Faubourg Saint-Honoré.—422 beds. *Physicians*: Drs. Millard, Guyot, Gombault, and Féréol; *Surgeons*: MM. Le Fort and Tillaux. The hospital possesses a library containing 200 volumes, and a large number of theses.

Hôpital Cochin, 17, Faubourg Saint-Jacques.—249 beds. *Physician*: Dr. Bucquoy; *Surgeon*: M. Desprès; *Obstetric Surgeon*: M. Lucas-Championnière. An obstetric department is attached to this hospital; but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42, Rue de Sèvres.—580 beds. *Physicians*: Drs. Ball, Damaschino, Ferrand, and Legroux; *Surgeon*: M. Nicaise.

Hospice de la Salpêtrière, Boulevard de l'Hôpital.—3,069 beds for old persons, and 662 for female lunatics. *Physicians*: Drs. Charcot and Luys; *Surgeon*: M. Terrier; *Physicians to the Lunatic Department*: Drs. Legrand du Saulle, Moreau, and A. Voisin. There is a medical library, founded and supported by the *internes*; it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system; and MM. Luys and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,794 beds for old persons, and 540 for male lunatics. There is also a small accident ward of twelve beds. *Physician*: Dr. Debove; *Surgeon*: M. Gillette; *Physicians to the Lunatic Department*: Drs. Falret, J. Voisin, and Bourneville. The library, which was founded in 1865, contains about 2,000 volumes.

Hôpital des Enfants Malades, 149, Rue de Sèvres.—518 beds. *Physicians*: Drs. Archambault, Bouchut, and Labric (for acute diseases), Simon, and Descroizelles (chronic diseases); *Surgeon*: M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital Sainte-Eugénie, 89, Rue de Charenton.—427 beds. *Physicians*: Drs. Bergeron, Triboulet, Cadet de Gassicourt; *Surgeon*: M. Lannelongue.

Hôpital Saint-Louis, 40, Rue Bichart.—823 beds; of which 637 are occupied with cases of skin-disease, 28 with obstetric cases, and the rest with surgical cases. *Physicians*: Drs. Hillairet, Lailler, Vidal, Guibout, Besnier, and Fournier; *Surgeons*: MM. Péan and Le Dentu. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. A museum containing several hundred models and drawings illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111, Boulevard du Port-Royal.—336 beds, devoted exclusively to the reception of cases of venereal disease. *Physicians*: Drs. Simonet and Mauriac; *Surgeon*: M. Horteloup.

Hôpital de Lourcine, 111, Rue de Lourcine.—243 beds. *Physicians*: Drs. Gougenheim and Martineau; *Surgeon*: M. Terrillon. Students are admitted to the hospital by special ticket.

Hôpital Tenon, Rue de la Chine.—635 beds. Besides these, 190 beds can be added in cases of epidemics, etc. *Physicians*: Drs. Gérin-Roze, Hallopeau, Grancher, Dieulafoy, Straus, and Rendu; *Surgeons*: MM. T. Anger and Delens.

Maison d'Accouchement, 121, Boulevard du Port-Royal.—316 beds. *Physician*: Dr. Hervieux; *Surgeon*: M. Tarnier; *Assistant-Surgeon*: M. Lucas-Championnière. The hospital is employed exclusively for the education of midwives, and is not open to students of medicine. Attached to the hospital is a school for midwives.

HOSPITAL APPOINTMENTS IN PARIS: CONCOURS.

The medical staff of each hospital in Paris consists of—1. Physicians and Surgeons; 2. Prosectors; 3. *Internes* and *Externes* in Medicine and in Surgery; 4. *Pharmaciens*; 5. *Internes* in Pharmacy.

All the appointments in the hospitals of Paris are obtained by *concours*; and, when vacant, are eagerly competed for.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater, and there are generally two or three *internes* and five or six *externes*.

The chief of the medical staff, physician or surgeon, receives annually a sum of 1,200 francs (£48) in the central hospitals, and 1,500 francs (£60) in the more distant ones. The physicians retire from hospital duty at the age of 65, and the surgeons at 63. When first nominated, they have to attend the consultations at the central bureau, and to do duty for any of the hospital physicians and surgeons that may be absent. As vacancies occur in the hospitals, they receive appointments in the order of their nomination.

The *internes* and *externes* are nominated by *concours* for four years, and receive 500 francs *per annum* for the first two years, 600 francs the third year, and 700 francs the fourth year. Some of them are also provided with lodging, fire, and light; others receive 400 francs yearly in lieu of lodging.

The *interne* is the most direct assistant of the hospital physician or surgeon; he accompanies him in his morning visit, and himself visits the patients in

the evening. The *internes* remain on duty in turn, to attend to urgent accidents and cases of illness.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat*.

Those candidates who are placed in the first list at the *concours*, but do not succeed in getting appointments, are termed provisional *internes*, and fill the places of those who are absent. They have, however, to compete again at the end of the year, if they desire to receive appointments.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases. The *externes* at the central hospitals are not paid; at those more distant from the centre of the city, they receive 300 francs yearly; at others more distant, one franc daily; at the Maison de Santé, 300 francs yearly, and 300 francs for expenses; at the Tenon Hospital, 50 francs monthly.

The *concours* for the *externat* generally commences early in October, and continues until the end of December. Candidates must not be under 18, nor above 26 years of age. They must produce—1. A register of birth; 2. A certificate of vaccination; 3. A certificate of good conduct signed by the mayor of the commune in which the candidate is domiciled; 4. A certificate of at least one inscription in the Faculty of Medicine. The examination consists in—1. An oral description of some subject in descriptive anatomy; 2. A similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau, generally from those most recently appointed.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce certificate of having performed the duties of *externe*, at least from the first day of the preceding January, without interruption (unless this have been unavoidable); also certificates from the physicians and surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. This is followed by an oral examination in the same subjects; ten minutes being allowed for each answer after ten minutes of consideration. The maximum of marks obtainable for the written examination is 30; for the oral 20. After this the candidates are classified.

At the end of the *concours*, the candidates are classified according to the number of marks; and the 35 or 40 first on the list are nominated *internes*.

The first four candidates on the list are the successful candidates for the prize for *externes*, the examination for which is the same as that for the *internat*. The first receives a case of instruments of the value of 300 francs, and has, during his first year, the sum of 800 francs in addition to the pay-

ment which he receives in common with the other *internes*. The first and second candidates are also presented with books.

The prizes offered to the *internes* are competed for in the beginning of November. The examination consists in—1. A written composition, for which two hours are allowed, bearing on anatomy, physiology, and pathology; 2. An oral description of some subject in external pathology; 3. A similar description of some subject in internal pathology (for each of these ten minutes are allowed); 4. *Internes* of the third and fourth years must also have sent in, before August 15, an original essay on some subject selected by them; this is generally based on observations made in the hospital.

The Civile prize, of the value of 1,000 francs, is given every second year to the best essay by an *interne* on duty on some point in the pathology of the genito-urinary passages.

The *concours* at the Bureau central for the office of physician consists of five examinations. 1. The candidate gives a lecture for a quarter of an hour on a patient, for whose examination ten minutes are allowed. 2. A lecture of twenty minutes' duration, after twenty minutes' reflection, on some subject in medicine. 3. A written consultation on a medical case; ten minutes being allowed for examining the patient, and three-fourths of an hour for writing out the consultation. To each of these examinations a maximum of 20 marks is allotted. During these three examinations, a process of elimination takes place, so that at last there remain five candidates for one place, eight for two, and ten for three places. These are then further subjected to the following tests: 1. A written composition for which three hours are allowed, on some subject in medicine, which must comprise a question in pathological anatomy; 2. A lecture of thirty minutes' duration on two patients, twenty minutes being allowed for examining them.

In the *concours* for the office of surgeon, the examinations are nearly the same; there is, in addition, an examination in operative surgery, and the candidate has to lecture on one subject instead of two.

MEDICAL SERVICE OF THE FRENCH ARMY.

Candidates for admission to the French medical service are chosen yearly by *concours*, in numbers proportioned to the demands of the service. They are distributed, at their own option and convenience, among the towns which possess military hospitals or wards for soldiers in civil hospitals, and have also a school of medicine; viz., Paris, Lille, Nancy, Lyons, Marseilles, Montpellier, Toulouse, Bordeaux, Nantes, Rennes, and Algiers: and *concours* are held at each of the places, for admission of pupils in medicine and pupils in pharmacy.

The following classes of candidates are admitted as pupils in medicine: 1. Students having eight, twelve, or sixteen inscriptions for the doctorate, and having passed the corresponding examinations: 2. Doctors in medicine. They must be born or naturalised Frenchmen, and must not have exceeded, on January 1st of the year in which the *concours* takes place, 23 years of age in the case of students with eight inscriptions, 24 years in the case of students with twelve, 25 years in the case of students with sixteen inscriptions, and 26 years in the case of doctors of medicine. They must be certified as fit for service by an army medical officer holding the rank of surgeon-major or a higher rank, and, if necessary, their fitness may be verified by an ex-

aming board ; and they must engage on honour to serve at least ten years from the date of appointment of *aide-major* of the second class. Candidates must make applications for admission on a form to be obtained at the offices of the military intendants resident in the places above mentioned.

The subjects of the examinations at the *concours* are as follows. For candidates with eight inscriptions : 1. A written composition on a question of physiology ; 2. Questions on descriptive anatomy and physiology. For candidates with twelve inscriptions : 1. A composition on a subject in general pathology ; 2. Questions on internal and external pathology ; 3. Questions on anatomy and psychology. For candidates with sixteen inscriptions : 1. A written composition on a question in medical pathology and therapeutics ; 2. Questions on external pathology and operative surgery ; 3. Questions on internal pathology, hygiene, and therapeutics. For doctors in medicine : 1. A written composition on a subject in general pathology ; 2. An oral examination on regional anatomy and its applications to medicine and surgery ; 3. Clinical examination of two patients. The examinations are conducted by a board, consisting of a medical inspector as president, a professor and an *agrégé* professor in the School of Military Medicine and Pharmacy, and the professor of applied chemistry in the school, together with a *pharmacien-major* of the first class. Three hours are allowed for writing the essay ; and each series of questions occupies twenty minutes.

Having passed a satisfactory examination, the candidates are attached to the military hospitals or wards in the town, and are subject to certain disciplinary rules with the object of regulating their studies. They do not wear uniform. Each candidate is allowed, for two years at most, from the time of his thirteenth inscription, a sum of 1,200 *francs* (£48) *per annum*, to pay for maintenance, books, and instruments. Those alone who have been bursars in the military Prytaneum are allowed, from the time of their admission as pupils in the military medical service, a monthly allowance of 1,200 *francs* in Paris, 1,000 *francs* in Lyons and Marseilles, and 800 *francs* in the other towns.

In case of rejection, the fees for admission to a second examination must be paid by the candidate ; and no one is admitted after a second rejection. Permission to study during an additional year is granted only when the pupil has been prevented by illness during at least two months in the year from following his studies.

Doctors of medicine, who have passed the required examinations, are admitted to the School of Military Medicine and Pharmacy, Val-de-Grâce, with the title of *médecin stagiaire*. The instruction given to them in the school is essentially practical, and has special reference to the requirements of military service. They are allowed 2,800 *francs* (£112) yearly, and wear uniform. They attend the school of Val-de-Grâce in Paris during at least eight months ; and, if found qualified on examination, receive the rank of *aide-major* of the second class.

NAVAL MEDICAL SCHOOLS.

For the purpose of training medical officers for the navy, there are three schools : Brest, Rochefort, and Toulon.

GERMANY.

GRADUATION IN MEDICINE.

IN the German Empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine ; viz., those of Berlin, Bonn, Breslau, Erlangen, Freiburg im Breisgau, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasbourg, Tübingen, and Würzburg.

No one can legally practise Medicine in this empire unless he have passed the Staats-Examen Board. The law forbids anyone to call himself *Arzt* (Physician) unless he have passed the State Board ; or Doctor, unless he have passed the examinations at some University, and thereby acquired the degree. The doctor who has not passed the State Board is not a licensed physician, and may hold no appointment ; and if he practise, he has no power or right to insist on payment of his services. The practitioner who is neither doctor nor physician, if any mishap occur from his ignorance, is punished not only by fine, but by imprisonment for a period varying from six months to ten years.

The expenses of passing the State Board are less than half of those for the Faculty of an University, and the examination is more exclusively practical ; hence it is selected by the poorer students who seek only a rural practice. The majority of students pass both the University and State examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma, either from an University or otherwise, can be obtained in Germany without a gymnasial certificate, to obtain which an examination must be passed at a German gymnasium (public school) in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this, or an equivalent certificate, must pass a preliminary examination in those subjects.

The number and character of professional chairs in the medical faculties vary greatly in the different Universities ; but in all we find three classes of teachers, viz., professors, extraordinary or assistant professors, and *privat-docents*.

The professors are appointed for life, and at the end of thirty years' service can retire on a pension ; they receive a fixed salary from the State or University—a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary is occasionally increased, according to the success and reputation of the professor. Any doctor in medicine may be a candidate for a vacant chair, the selection being made by the Minister of Public Instruction from a list of names recommended by the faculty.

The extraordinary or assistant professors are appointed in like manner from among the *privat-docents*. As a rule, their compensation comes only from students' fees, but occasionally a small fixed salary is allowed.

There are no independent schools in Germany. There is, however, little objection to free, or, as it is sometimes called, 'extramural teaching', and hence young men of ability can establish themselves as private teachers, demonstrators, etc., in the immediate vicinity of the Universities, relying on their own talents and tact to secure pupils. These are the *privat-docents*, much of whose teaching consists

in giving short courses, of from six to eight weeks' duration, on special subjects. The position of *privat-docent* is accessible to all doctors of medicine, and the number is unlimited. Their compensation is from students' fees, and they may not underbid the regular professor. At some Universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance. The *privat-docents* are understood to be in training for professorships, and, if they show marked ability as teachers or as investigators, their promotion may be very rapid.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years. At some, the course extends over four years. The following lectures are the least which will be accepted by any of the University faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly. For two years: Special Pathology and Medical Clinic at Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operating, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course. Obstetrics and Gynaecology, with Clinics, three hours weekly for one year; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly, for one year; Forensic Medicine, two hours weekly, for one year.

The professors receive fixed salaries, varying from £120 to £480 annually, and increased every ten years by the addition of from £20 to £50. The students' fees for the entire course vary in different schools from £36 to £52.

REGULATIONS FOR THE GERMAN STAATS-EXAMEN.

The examination for the licence to practise as a Physician, Surgeon, and Accoucheur, in any part of the German Empire, may be either passed before the Medical Examination Commission at Berlin, or before a Medical Examination Committee at any German University. The Examination Committees, consisting of scientifically educated professional men in all branches of the Faculty, are appointed every year by the authorised Central Board, on whose decision it depends whether the President of the Commission shall be selected from the examiners or not. The notice for examination before the superior Examination Committee must be deposited with the Minister of Medical Affairs at Berlin, and the notice for examination before an Academical Examination Committee with the acting Curator of the University chosen, or, in default of such functionary, with the nearest superior Court of the Examination Commission. To the notice for examination must be attached: 1. A certificate of having completed a course of study at a gymnasium; 2. A certificate of the full course of medical study at an University; 3. A cer-

tificate of proficiency at the Natural Science Examination of some German University; 4. Proof that the candidate has taken part and had practice for at least two terms both in Clinical Surgery and in Clinical Medicine, and in Clinical Midwifery has attended at least four separate labours; 5. A testimonial from a public vaccinator, or some other recognised medical man, that the candidate has acquired the necessary dexterity in Vaccination.

The examinations commence every year in November, and are continued beyond the middle of July in the following year.

Candidates who have not reported themselves at the latest by the end of the year, and who have not deposited the certificates required, are not admitted to examination before the November following. Exceptions to this rule can only be made under very special circumstances.

The examination is divided into five parts, viz.: 1. Anatomical, Physiological, and Pathological; 2. Surgical and Ophthalmic; 3. Medical; 4. Gynaecological; 5. *Viva voce*. All candidates, without exception, must pass these examinations in the above order.

In the first portion, the candidate has to write essays on the various subjects, and also to demonstrate on the dead body, and reply to questions put to him.

In the second portion, the candidate has to undergo a clinical and a technical test. The clinical part is conducted in the surgical department of a large hospital, or in the clinic of an University, and usually lasts from seven to nine days, the candidate during this period taking charge of several patients, under the supervision of one of the examiners. During this period, also, the candidate may be required to satisfy the examiners that he can operate on the dead body, and is always required to give his diagnosis in an ophthalmic case.

The third portion of the examination is devoted to medicine, and is purely clinical. The candidate is examined in a hospital or in a clinic of an University, and is required to write prescriptions, and to give his opinion as to the doses of certain drugs used in certain cases of sickness.

The fourth portion consists in an examination conducted in the Charity Lying-in Hospital at Berlin, or in the Lying-in Hospital of an University. The candidate has to examine cases in the presence of an examiner, and to give the diagnosis, prognosis, and treatment. He is also required to attend a case of labour in the presence of an examiner, and to write down his opinion afterwards, stating the exact presentation, etc. He is also required to undertake the treatment of cases during seven days, under the superintendence of an examiner.

The fifth portion, the *viva voce* examination, is conducted publicly, under the superintendence of the President of the Examination Commission, by three Commissioners. To this examination, only those candidates are admitted who have satisfactorily passed the previous portions. This examination includes General and Special Pathology, Therapeutics, Surgery, Midwifery, Pharmacy, and Hygiene. Any candidate who fails to pass these five portions of the examination twice will not be readmitted to examination.

The fee for the examination is 204 marks (or £10 4s. English money), viz.:

	℔	s.	d.	Marks.
1st portion	2	6	0	= 46
2nd „	3	3	0	= 63
3rd „	1	14	0	= 34
4th „	1	4	0	= 24
5th „	0	6	0	= 6
Expenses ...	1	11	0	= 31
	℔10	4	0	204

The examinations are always conducted in the German language.

UNIVERSITY OF BERLIN.*

THE conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University at Berlin, are as follows.

1. Candidates must have studied medicine at least four years in one or more Universities regularly constituted. Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. 2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. 3. The candidate has to make application to the Dean, handing in at the same time the documents mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean, before being admitted to the *examen rigorosum* before the Faculty. The verbal examination is generally conducted in German or Latin, and extends to all branches of theoretical and practical medicine. At the written examination, an *ex tempore* essay must be written, without any assistance, in a given time. 4. After the preliminary examination, the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination, and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. 5. The *examen rigorosum* takes place before six members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners examining the candidate for a quarter of an hour. No branch of theoretical and practical medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. From this examination no candidate can be exempted. If he be rejected, six months must elapse before re-admission. 6. After this, the candidate must present a German or Latin dissertation. The members of the Faculty are ready to advise the candidate as to the choice of a subject for his essay; but the essay must be entirely original; and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty, the candidate will have to get printed, at his own expense (about 85 marks), by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curri-*

culum vite, and at least three theses approved by the Dean. After this, follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards, anyone belonging to the University is at liberty (*e coronâ*) to oppose. Both the candidate and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education has the privilege of allowing the use of another language, and also of dispensing with the discussion. 8. After the discussion is ended, the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery takes place, conducted by the Dean or his representatives. After the ceremony of promotion is completed, the Dean delivers the diploma to the newly created doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 marks) is borne by the candidate. A copy of it is fixed on the black board of the Faculty, and a certain number of copies are delivered to the Registrar of the University, for distribution. Promotion *in absentia* can on no account take place. 9. Four hundred and forty *reichsmarks* (℔22) must be paid to the Dean as fees for the degree of Doctor in Medicine, of which 221 marks must be paid on application, and are forfeited after the *examen rigorosum*, if the candidate be unsuccessful. The second portion (204 marks for the Faculty and 15 marks for the University library) may be paid either at the same time with the other or within the period between the *examen rigorosum* and the promotion. In addition to this, the candidate has to pay expenses of printing the dissertation and diploma (*vide* 6 and 8). 10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, it is stipulated that the dissertation be delivered ready for printing to the Dean at the first application, and that the other business of the Faculty permits them to proceed at once to the examinations.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *doctents* or private teachers. *Ordinary Professors*: K. B. Reichert, Anatomy; A. Bardeleben, Surgery and Clinical Surgery; R. Virchow, Pathology; F. T. Frerichs, Medicine and Clinical Medicine; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine and Epidemiology; E. Leyden, Medicine and Clinical Medicine; E. von Bergmann, Surgery and Clinical Surgery; C. Schröder and A. Gusserow, Obstetrics and Gynecology; O. Liebreich, Materia Medica and Chemistry; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Psychiatric Clinic. *Extraordinary Professors*: E. Henoeh, Diseases of Children; F. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzeczka, Hygiene and Medical Police; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Diseases of the Skin and Syphilis; H. Jacobson, Medicine; E. Albrecht, Dental Surgery; H. Munk, Physiology; C. A. Ewald, Physical Diagnosis; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Physiology; O. Fräntzel, Medicine; H. Senator, Diseases of Children; F. Busch, Surgery; H. Kronecker, Physiology; H. Fasbender, Gynecology; H. L. Schöler, Ophthalmic Surgery; J. Hirschberg, Ophthalmic Surgery; E.

* For much of the information in this and subsequent pages, we are indebted to Dr. Hardwicke's *Medical Education and Practice in all Parts of the World*.

Küster, Surgery; A. Christiani, Physiology; M. Bernhardt, Medicine; E. Baumann, Physiology. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty. *Ordinary Professors*: S. Schwendener, Botany; H. Helmholtz, Physics; W. Peters, Zoology; A. W. Hofmann, Chemistry; A. W. Eichler, Botany; C. Rammelsberg, Chemistry. *Extraordinary Professors*: A. Garcke, Botany; L. Kny, Botany; P. Ascherson, Botany; E. von Martens, Zoology; E. Sell, Chemistry; A. Pinner, Chemistry and Pharmacy; C. Liebermann, Chemistry; L. Wittmack, Botany; C. Jessen, Botany.

The institutions for Clinical Teaching connected with the University are: the University Polyclinic (Dr. Meyer); the Ophthalmic Polyclinic (Dr. Schweigger); the Aural Polyclinic (Dr. Lucae); the Obstetric Clinic (Dr. Schröder); the Institute for Practical Instruction in State Medicine (Dr. Liman); in the Charité Hospital, the Medical Clinic (Dr. Frerichs), the Clinic for Elementary Medical Instruction (Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Ophthalmic Clinic (Dr. Schweigger), the Obstetric Clinic (Dr. Gusserow), the Gynaecological Clinic (Dr. Schröder), the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin), for Diseases of Children (Dr. Henoch), and for Diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; the Physiological Laboratory under that of Professor Du Bois-Reymond; the Chemical Laboratory under that of Professor Hofmann; and the Pharmaceutical Laboratory under that of Professor O. Liebreich. The Pathological Institute, which owes its existence in its present form to Professor Virchow, and has served as the model for numerous similar institutions in Germany and elsewhere, is situated within the grounds of the Charité Hospital. It contains a lecture-theatre, a room for demonstrations, a museum, a chemical laboratory, a histological laboratory, a suite of rooms for the *post mortem* examinations, private rooms for the professor and his assistants, while in the basement-floor there are kept animals for experiment.

UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery, is granted only under the following conditions, viz.:

1. An examination in all branches of medicine and surgery, of about three hours' duration, in the German language; 2. A written scientific dissertation in German or Latin; 3. Public defence of the dissertation in German or Latin; 4. Fee for the examination and diploma, 360 marks (£18), which must be paid prior to examination.

The following are the Professors in the Medical Faculty of this University. *Ordinary Professors*: C. Binz, Materia Medica; F. Trendelenburg, Surgery; C. Köster, Pathology; A. de la Valette St. George, Anatomy and Histology; F. von Leydig, Comparative Anatomy; E. Pflüger, Physiology; H. Rühle, Medicine; T. Sämisch, Diseases of the Eye; G. Veit, Gynaecology and Forensic Medicine. *Extraordinary Professors*: C. Finkelnburg, Mental Diseases; J. Doutrelepont, Surgery; C. von Mosengeil, Surgery; F. Obernier, Diseases of Children; H. Schaaffhausen, Physiology; M. Nussbaum, Anatomy and Histology; N. Zuntz, Anatomy and Histology. Instruction is also given in the Philosophical Faculty—*Ordinary Professors*: F. H. Trotschel, Zoology; R. Clausius, Experimental Physics;

E. Strassburger, Botany; and A. Kekulé, Chemistry. *Extraordinary Professor*: O. Wallach, Chemistry; F. Schmitz, Botany.

Connected with the University are medical, surgical, obstetric, and ophthalmic clinics; an anatomical theatre and museum, and physiological, pathological, pharmacological, and chemical institutes.

UNIVERSITY OF BRESLAU.

THE following Professors belong to the Medical Faculty of this University. *Ordinary Professors*: A. Biermer, Medicine; E. Ponfick, Pathology; H. Fischer, Surgery; R. Förster, Ophthalmic Surgery; H. Häser, Materia Medica and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; H. Fritsch, Obstetrics and Gynaecology. *Extraordinary Professors*: L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; H. Friedberg, Forensic Medicine and Public Health; R. Gscheidlen, Physiology and Physiological Chemistry; I. Klopsch, Surgery; A. Neisser, Diseases of the Skin and Syphilis; H. Neumann, Psychological Medicine; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Forensic Medicine and Hygiene; H. Sommerbrodt, Medicine; O. Berger, Medicine; H. Gierke. Instruction is also given in the Philosophical Faculty on subjects connected with medicine by—*Ordinary Professors*: C. J. Löwig, Chemistry; H. R. Göppert, Pharmacology; A. Schneider, Zoology; O. E. Meyer, Experimental Physics; T. Poleck, Chemistry; F. Cohn, Botany. *Extraordinary Professors*: G. W. Körber, Botany; F. E. Dorn, Physics; V. von Richter, Chemistry.

The University possesses anatomical, physiological, pathological, pharmaceutical institutes, and clinics of medicine, surgery, obstetrics, ophthalmic surgery, syphilis and skin-diseases, and mental diseases.

UNIVERSITY OF ERLANGEN.

THE following are the regulations to be observed by candidates for the degree of Doctor of Medicine in this University.

1. Candidates for the degree of Doctor must announce their intention to the Dean of the Faculty of Medicine, and present the following documents: *a*. Evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b*. Proof of having studied medicine in one of the German Universities, or in a corresponding medical school abroad, during at least three years; *c*. A thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own. 2. The dissertation is examined by a referee, appointed by the Dean; and, if it be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. It may take place in two forms; *a*. As a colloquium, in the case of those who have passed an examination in medicine before a German examining board; *b*. As an extended examination on all departments of medical science, in the case of those who have not passed such an examination. The colloquium takes place under the presidency of the Dean before three delegates of the Faculty; the detailed examination is conducted by the Dean and four other members of the Faculty. Both the colloquium and the latter examination are held in public, and in German. 3. After the conclusion of

the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred, the fact being communicated to the candidate by the Dean, and his diploma issued to him. 4. The candidate, if his dissertation be approved, must have it printed at his own expense. At the back of the title-page it must be stated that the dissertation is printed with the consent of the Faculty; and the name of the reporter (*referent*) must be given. 5. The candidate must pay a fee of 300 marks (equal to about £15 10s.) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty. 6. If the candidate fail to pass the examination, half of the fee is returned to him.

The Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors*: J. von Gerlach, Anatomy; F. A. Zenker, Pathology; W. Heineke, Surgery; I. Rosenthal, Physiology; W. O. Leube, Practice of Medicine and Clinics; H. Sattler, Ophthalmology; P. Zweifel, Midwifery. *Extraordinary Professors*: F. W. Hagen, Psychological Medicine; W. Filehne, Materia Medica and Therapeutics; F. Penzoldt, Medicine. Instruction in subjects connected with medicine is also given in the Philosophical Faculty. *Ordinary Professors*: E. Lommel, Experimental Physics; Fischer, Chemistry; M. Reess, Botany; E. Selenka, Comparative Anatomy; A. Hilger, Pharmacy and Chemistry.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

UNIVERSITY OF FREIBURG.

THE Faculty of Medicine here grants a degree in Medicine, Surgery, and Midwifery. The following are the conditions to be observed before being admitted to examination.

1. A certificate must be produced showing the respectability of the candidate, and also the amount of his education, both prior to and since his admission as a medical student. 2. A scientific dissertation must be handed to the Dean, written in German or Latin. 3. A fee of 300 marks (£15) must be paid to the Chief Beadle. In case of rejection, the candidate will receive half the fee back; and when he presents himself for examination again, he pays only that amount, viz., 150 marks. Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate will be admitted to a *vivâ voce* examination in the German language.

The following are the subjects for examination: Anatomy, Materia Medica and Toxicology, Physiology, Medicine, Surgery, Pathological Anatomy, Midwifery, Ophthalmology.

If a candidate have already passed an examination as Physician before a German commission of examiners, the number of subjects may be reduced.

If the examination be passed, one of the following grades of honour is conferred: 1. *Summâ cum laude*; 2. *Insigni cum laude*; 3. *Cum laude*.

The Medical Faculty of the University is thus constituted. *Ordinary Professors*: A. Ecker, Human and Comparative Anatomy; H. Strasser, Anatomy; L. von Babo, Chemistry and Physiology; R. Maier, Pathological Anatomy and State Medicine; A. Hegar, Midwifery; F. Hildebrand, Botany; W. Manz, Ophthalmic Surgery; Ch. Bäumlér, Materia

Medica and Medicine; G. F. L. Thomas, Materia Medica and Medicine; H. Maas, Surgery. *Extraordinary Professors*: A. Schinzinger, Surgery; R. Kaltenbach, Midwifery; J. Latschenberger, Physiological Chemistry and Practical Physiology; R. Wiedersheim, Anatomy and Histology; A. Röhrig, Pharmacology; J. von Kries, Physiology; P. Langenhans; J. von Rotteck. In the Philosophical Faculty, lectures on subjects connected with medicine are given by Professors A. Weismann in Zoology, A. Claus in Chemistry, and E. Warburg in Experimental Physics.

The University library contains 250,000 volumes. There are a chemical laboratory and institutions for the practical study of anatomy, pathology, physiology, etc.; and medical, surgical, obstetric, and ophthalmic clinics.

UNIVERSITY OF GIESSEN.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions.

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at a University or a Medical Institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country in place of the gymnasial maturity certificate (a degree in arts or certificate of having passed the matriculation examination for medical students at any recognised University is sufficient). 2. The candidate must present a dissertation on some medical subject, written in German or Latin, together with a declaration in his own handwriting that he has composed the dissertation himself, without help from others, except what may be stated by him. In place of the dissertation, a previously published treatise or literary production may be substituted. 3. In case of admission by the Faculty, the whole of the documents are laid before the Rector and the Chancellor, who may object to the admission if they be not satisfied. 4. If no objection be made by the Rector and Chancellor, and the candidate have paid the promotion fees to the Quæstor of the University, the dissertation is to be judged by a Referee. If the Referee declare the work to be unsatisfactory, the candidate is rejected. In the contrary case, he is admitted to *vivâ voce* examination before the Faculty. 5. The *vivâ voce* examination takes place in the German language, and lasts two or three hours. It is held in public, except when the candidate is already advanced in age, or in a few other cases, when the Faculty decree that it may be held in private. 6. The verbal examination embraces the following subjects: Anatomy, Physiology, Pathological Anatomy, Histology, Pathology and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, Obstetrics. 7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners in a private sitting, and at once made known to the candidate by the President. The examination is not passed when two or more members of the Faculty declare the result of the examination to have been unsatisfactory. The kind of degree to be granted is decided by a majority of votes—whether *cum laude*, *magnâ cum laude*, or *summâ cum laude*. 8. The approved dissertation must be printed and published, and the

appointed number be presented to the Faculty before the promotion takes place. Exception is made when the candidate has already handed in a printed treatise. 9. Promotions to the M.D. *in absentia* do not take place at this University, except in the case of degrees granted *honoris causa* by the unanimous decision of the Faculty, to men who have rendered some great service to the science of medicine. 10. The fee for promotion is 440 marks (£22), which must be paid to the Quæstor of the University at the time of the petition for admission. If the dissertation be not considered satisfactory, and the candidate in consequence be not admitted to the verbal examination, 100 marks are retained by the Faculty. If the verbal examination be not passed, half the fees are forfeited; but, if the candidate present himself again, he has only to pay half the fees.

The following are the professors in the Faculty of Medicine in this University. *Ordinary Professors*: H. Bose, Surgery; J. Wilbrand, Forensic Medicine and Hygiene; C. Eckhard, Physiology and Toxicology; F. Riegel, Medicine; F. Ahlfeld, Obstetrics and Gynæcology; G. Pflug, Veterinary Medicine; F. Marchand, Pathology; F. W. von Hippel, Ophthalmic Surgery; C. Gähtgens, Materia Medica. *Extraordinary Professors*: F. Birnbaum, Diseases of Children; F. Eichbaum, Histology and Veterinary Medicine. There are also two *doctents*. In the Philosophical Faculty, subjects connected with medicine are taught by—*Ordinary Professors*: H. Will, Chemistry; H. Hoffmann, Botany; W. C. Röntgen, Experimental Physics; A. Schneider, Zoology. *Extraordinary Professors*: A. Naumann and A. Laubenheimer, Chemistry.

The University Library contains 140,000 volumes. There are an academical hospital, with medical, surgical, and ophthalmic clinics, a lying-in institution, a chemical laboratory, a physiological, a pathological, and a pharmacological institute.

UNIVERSITY OF GÖTTINGEN.

A DEGREE in Medicine, Surgery, and Obstetrics is granted under the following conditions.

1. A written essay must be sent in on any medical subject chosen by the candidate, on the result of which depends the entrance to the examination. 2. If the essay be considered satisfactory, the student is admitted to a *viva voce* examination, which lasts a few hours, and is always held in German or Latin, at the option of the candidate. 3. A fee of 439 marks (£21 19s.) must be paid to the Medical Faculty prior to examination. 4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics.

If the candidate be successful, he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors*: J. Henle, Anatomy; F. Wöhler, Chemistry; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmic Surgery; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; J. Orth, Pathology; W. Baum; *Extraordinary Professors*: H. Eichhorst, Medicine and Diseases of Children; C. F. Lohmeyer, Surgery; J. Rosenbach, Surgery; W. Krause, Physiology; E. F.

W. Herbst, Physiology; T. Husemann, Materia Medica and Toxicology. In the Philosophical Faculty instruction is given by—*Ordinary Professors*: J. B. Listing, Physics; J. Reinke, Botany; F. Ehlers, Zoology; the Count of Solms-Laubach, Botany; H. Hübner, Chemistry. *Extraordinary Professors*: C. Boedecker, Pharmacy and Physiological Chemistry; L. von Usler, Organic and Pharmaceutical Chemistry; E. Riecke, Experimental Physics; H. J. Esser, Veterinary Medicine; J. Post, Chemistry.

The following institutions are connected with the Medical Faculty: institutions for teaching animal and vegetable physiology and pharmacology, and pathology; the Ernst-August Hospital, with medical, surgical, and ophthalmic clinics; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

UNIVERSITY OF GREIFSWALD.

THE Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors*: J. Budge, Anatomy; H. C. A. Pernice, Midwifery and Diseases of Women; F. Grohé, Pathological Anatomy; F. Mosler, Medicine; P. Vogt, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; (vacant), Materia Medica. *Extraordinary Professors*: C. Eichstedt, Midwifery, Diseases of the Skin, and Syphilis; W. Häckermann, Forensic Medicine and Hygiene; R. Arndt, Psychology and Nervous Diseases; P. Krabler, Diseases of Children; F. Sommer, Anatomy. Instruction is given in the Philosophical Faculty by—*Ordinary Professors*: A. H. A. J. Münter, Botany; H. Limpricht, Chemistry; H. Schwanert, Chemistry and Pharmacy; A. Gerstäcker, Comparative Anatomy and Zoology. *Extraordinary Professor*: F. Baumstark, Chemistry.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

UNIVERSITY OF HALLE.

THE following are the regulations for the medical degree.

1. Application for admission to the examinations must be made to the Dean, and at the same time must be presented:—(a) a *curriculum vitæ*; (b) certificate of maturity from a gymnasium; (c) certificate of having passed a *tentamen physicum* at least two years previously; (d) certificates of leaving, from the Universities, over at least eight medical scholastic half years. Whoever is unable to present these certificates complete, and in the manner specified, must obtain a dispensation from the Chief Manager. 2. On making application, 360 marks must be paid to the Dean for the examinations and the promotion, besides which, 12 marks must be paid before the promotion to the Secretary of the University. 3. The examinations are held on two consecutive days, by the regular professors of the Faculty, on each of which days the result of the examination is made known to the candidate. 4. After passing his examination, the candidate must compose a scientific treatise on any subject he pleases in medical science, and deliver it to the Dean, together with the theses, to be publicly discussed, and the *curriculum vitæ* for examination and approval; the same when printed must fill at least two quires. The candidate must bear the cost of printing both the treatise and the diploma; but the diploma must be laid before the Dean for ap-

proval before being printed. Of the treatise, 172 copies must be delivered to the Secretary of the University at least three days before the promotion, and 40 copies of the diploma; when the Secretary will give a receipt in the name of the Dean, and also for the 12 *marks* mentioned under No. 2. 5. The candidates have to request all the examiners personally to be present at the examination, likewise the members of the Faculty, when handing over the printed treatise for promotion. 6. In the application for promotion, the candidate solicits from the Dean, in a few preliminary words, permission to defend his treatise and the theses; and this takes place, then, against two previously appointed opponents; after which, those present are also called upon to join in the discussion. After the discussion is ended, the candidate begs the Dean to grant him the degree of Doctor; and this is done by administering the doctoral oath, and delivering the diploma. 7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, will receive back from the fees paid 40¼ *marks*; the rest goes to the Faculty. 8. The time for taking the degree is left to the candidate. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, or else he will have to submit to re-examination, and must pay over again all the fees.

The following professors, with several private teachers, constitute the Medical Faculty of this University. *Ordinary Professors*: L. Krahmer, *Materia Medica* and *Forensic Medicine*; Th. Weber, *Medicine*; R. Olshausen, *Obstetrics* and *Gynaecology*; Th. Ackerman, *Pathology*; H. Welcker, *Anatomy*; R. Volkmann, *Surgery*; J. Bernstein, *Physiology*; A. Gräfe, *Ophthalmic Surgery*; E. Hitzig, *Physiological Medicine*; K. J. Eberth, *Histology*. *Extraordinary Professors*: H. Schwartze, *Diseases of the Ear*; E. Kohlschütter, *Medicine*; E. Harnack, *Animal Chemistry* and *Biology*; B. Solger, *Anatomy*; A. Seligmüller, *Medicine*. In the *Philosophical Faculty*, instruction in *Sciences* connected with *Medicine* is given by—*Ordinary Professors*: G. Kraus, *Botany*; J. Vollard, *Chemistry*; H. Grenacher, *Zoology*. *Extraordinary Professors*: B. Rathke, *Chemistry*; E. Schmidt, *Pharmaceutical Chemistry*; A. Oberbeck, *Physics*.

The University library contains 100,000 volumes. Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-surgical hospital, and physiological, pathological, and pharmaceutical laboratories.

UNIVERSITY OF HEIDELBERG.

THE following are the regulations to be observed for graduation in medicine in this University.

1. In applying for examination for the degree of Doctor, no evidence of previous study is required. 2. The same demands are made of all candidates; the only difference is that the oral examination is shortened if evidence be produced that the candidate has undergone, in the German empire, the *Staats-examen* for license to practice. 3. The subjects of examination are (1) *Anatomy*; (2) *Physiology*; (3) *Pathological Anatomy*; (4) *Materia Medica* (*Pharmacognosics*, *Pharmacodynamics*, and *Toxicology*); (5) *Medicine*; (6) *Surgery*; (7) *Midwifery*; (8) *Ophthalmic Surgery*. 4. A candidate may select one of these as the principal subject of

his examination. All the other subjects then become secondary. 5. The examination is oral and written. The oral examination can only be conducted in the German language. 6. The written part of the examination consists of a medical dissertation in German or Latin, which must be given in before the oral examination. The dean of the Faculty of Medicine delivers the dissertation (or a scientific publication by the candidate, which may be substituted for it) to a reporter for his opinion. The reporter is authorised to hold a conversation with the candidate on the subject treated of in the work. In voting on the dissertation, the question is put whether it shall be allowed to be printed. If it be printed, the names of the dean for the time being, and of the reporter, must appear on the title-page. 7. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. The number and selection of the secondary subjects vary, according as the state-examination has or has not been passed. If proof be given that a state-examination has been passed in the German Empire, the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself. If there be no proof of a state-examination, he is examined in five secondary subjects. Of these, three are fixed—*Anatomy*, *Physiology*, and *Pathological Anatomy*; the other two may be chosen by the candidate. But if one of the three fixed subjects be chosen by the candidate as the principal subject, its place as a secondary subject is taken by another, selected by the candidate. 8. The duration of the oral examination depends on the number of subjects. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes, according to the judgment of the examiners. 9. On the result of the entire examination, three notes are granted. The first (*summa cum laude*) can only be granted when the dissertation has received the *imprimatur* of the Faculty. Even when the *imprimatur* has been received, the result of the oral examination may be such as to entitle the candidate to the second vote (*insigni cum laude*) or to the third (*cum laude*). 10. No oath is administered. When the diploma is delivered to the candidate by the dean, he has to give his hand in promise that he will bear his academical dignity with honour. 11. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 *marks* (about 22*l.* 5*s.*), which must be paid before the commencement of the examination. Of this sum, if the oral examination be not passed, 179 *marks* (about 9*l.*) are returned. 12. The diploma contains a record of the principal subject, the vote on the whole examination, and the judgment on the dissertation.

The Medical Faculty consist of the following professors, with several teachers. *Ordinary Professors*: F. Kehrer, *Midwifery*; W. Delffs, *Chemistry*; C. Gegenbaur, *Human* and *Comparative Anatomy*; W. Kühne, *Physiology* and *Histology*; O. Becker, *Ophthalmic Surgery*; Th. von Dusch, *Medicine*; W. Erb, *Medicine*; J. Arnold, *Pathology*; V. Czerny, *Surgery*; C. Fürstner, *Psychological Medicine*. *Honorary Professor*: A. Nuhn, *Human* and *Comparative Anatomy*. *Extraordinary Professors*: H. Oppenheimer, *Materia Medica*; S. Moos, *Diseases of the Ears*; F. Knauff, *Forensic Medicine* and *Hygiene*; H. Lossen, *Surgery*; A. Weil, *Medicine* and *Diseases of the Skin*, and *Syphilis*; R. Thoma, *Pathological Anatomy*; H. Braun, *Surgery*; F. Schultze, *Diseases of the Nervous System*; A. Jurasz, *Diseases of the*

Throat. In the Philosophical Faculty, instruction in subjects connected with medicine is given by—*Ordinary Professors*: R. Bunsen, Chemistry; H. Kopp, Chemistry; G. Quincke, Experimental Physics; O. Bütschli, Zoology; E. Pfitzer, Botany. *Extraordinary Professors*: A. Bornträger, Pharmacy; A. Horstmann, Chemistry; R. Kossmann, Zoology.

In connection with the University are a hospital, with medical, surgical, and ophthalmic clinics, an institution for diseases of the ear, a lying-in institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

UNIVERSITY OF JENA.

THE Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions for which are as follow:

1. Certificate to be given as to the extent of medical studies, and the period of time which has elapsed since their completion (at least six terms).
2. Satisfactory evidence as to character, from the neighbouring head office of police.
3. A written essay upon any subject of medical science, in German or Latin. The same composition may be given up, to be printed afterwards in the form of a dissertation.
4. Matriculation into this University. This is done when, upon fulfilment of the other conditions, the candidate himself makes his appearance.
5. Payment of examination and promotion fees must be made to the amount of 141 *thalers* (about £22). In case the examination is not passed, the promotion fees and 52 *thalers* are returned. The examination will be held in the German language only. It comprises all branches of medicine, viz.: Anatomy, Physiology, Histology, General Pathology, Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, etc. When the examination is passed, the student has to give in his dissertation, the subject of which he chooses for himself. The Faculty examines the work to see whether it is worth publication. A dispensation from the Latin or German disputation may be granted, when the examination is very satisfactorily passed. After the essay is printed, and also when the public disputation is over, the making out of the medical diploma takes place. The degree of doctor will only be granted in this University by the Faculty upon fulfilment of the above-named conditions.

The Medical Faculty of this University is constituted as follows. *Ordinary Professors*: F. Ried, Surgery; B. Schultze, Obstetrics; W. Müller, Pathology; W. Preyer, Physiology; O. Hertwig, Anatomy; (vacant), Medicine. *Honorary Professor*: M. Seidel, Materia Medica. *Extraordinary Professors*: L. Schillbach, Diseases of the Eye and Ear; C. Frommann, Physiology and Histology; C. Bardeleben, Anatomy; P. Fürbringer, Diseases of the Skin and Syphilis; O. Küstner, Gynaecology; H. Kuhnt, Ophthalmic Surgery. Subjects connected with Medicine are also taught in the Philosophical Faculty by—*Ordinary Professors*: G. A. Geuther, Chemistry; E. Häckel, Zoology. *Extraordinary Professors*: E. Reichardt, Chemistry; E. Hallier, Botany; R. Hertwig, Zoology; H. Gutzeit, Chemistry and Pharmacy.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum; anatomical, zoological, physiological, pathological, and chemical laboratories and museums, etc.

UNIVERSITY OF KIEL.

THE following are the conditions for obtaining the medical degree: 1. The presentation, on application, of (a) a *curriculum vitae*; (b) certificate of medical studies; (c) a scientific treatise; 2. A written examination; 3. A verbal examination before the Faculty; 4. Payment of 360 marks.

In this University the Medical Faculty consists of the following professors, with five private teachers. *Ordinary Professors*: C. C. T. Litzmann, Obstetrics and Gynaecology; F. Esmarch, Surgery; H. Quincke, Medicine; V. Hensen, Physiology; A. Heller, Pathology; C. Völckers, Diseases of the Eye; W. Flemming, Anatomy. *Extraordinary Professors*: J. Bockendahl, Forensic Medicine; G. J. F. Edlefsen, Medicine; F. Petersen, Surgery; A. Pansch, Anatomy; F. A. Falck, Materia Medica. Instruction is also given in the Philosophical Faculty by *Ordinary Professors*: C. Himly, Chemistry; K. Möbius, Zoology; A. Engler, Botany; A. Ladenburg, Chemistry.

There are a medico-chirurgical hospital, containing medical, surgical, and ophthalmic clinics, a lying-in institution, and laboratories and museums in connection with the several subjects taught.

UNIVERSITY OF KÖNIGSBERG.

THE Medical Faculty of this University consists of the following professors, with several private teachers.

Ordinary Professors: W. von Wittich, Physiology; (vacant), Obstetrics and Gynaecology; G. Schwalbe, Anatomy; E. Neumann, Pathology; C. Schönborn, Surgery; B. Naunyn, Medicine; J. Jacobson, Ophthalmic Surgery; M. Jaffe, Medical Chemistry. *Extraordinary Professors*: H. Bohn, Diseases of the Skin; A. W. Grünhagen, Histology; S. Samuel, Therapeutics; S. Pincus, Forensic Medicine; E. Berthold, Diseases of the Eye and Ear; F. R. A. Schneider, Surgery and Military Surgery; B. A. Benecke, Anatomy; E. Burrow, Surgery; J. Caspary, Diseases of the Skin and Syphilis; P. Baumgarten, Pathology. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors*: R. Caspary, Botany; H. Spigatis, H. Ritthausen, and W. Lossen, Chemistry.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics; chemical and pharmaceutical laboratories, etc.

UNIVERSITY OF LEIPZIG.

THE Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors*: J. Radius, Hygiene and Pharmacology; F. Hofmann, Hygiene; E. Wagner, Medicine; C. S. F. Credé, Midwifery; J. Cohnheim, Pathological Anatomy; C. F. W. Ludwig, Physiology; C. Thiersch, Surgery; E. A. Coccus, Ophthalmic Surgery; W. His, Anatomy; C. W. Braune, Topographical Anatomy; (vacant), Medicine. *Extraordinary Professors*: H. Sonnenkalb, Forensic Medicine and Hygiene; J. V. Carus, Zoology and Comparative Anatomy; A. Winter, Materia Medica; C. Hennig, Obstetrics; C. H. Reclam, Forensic Medicine and Hygiene; B. G. Schmidt, Surgery; E. F. Wenzel, Anatomy and Histology; J. O. L. Heubner, Medicine; E. R. Hagen, Otolaryngology, etc.; A. R. Brenner, Diseases of the Nervous System; P. E. Flechsig, Anatomy and Histology; E. Drechsel, Physiology; C. Weigert,

Medicine; A. Rauber, Anatomy. Instruction is also given in the Philosophical Faculty by—*Ordinary Professors*: W. Hankel, Physics; H. Kolbe, Chemistry; A. Schenck, Botany; R. Leuckart, Zoology; G. Wiedemann, Chemistry. *Extraordinary Professors*: H. Hirzel, Pharmacy; F. A. Zörn, Veterinary Medicine; A. Weddige, Chemistry.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories; a zoological institute, under the direction of Professor Leuckhardt; an anatomical institute, under Professor His; a physiological institute, under Professor Ludwig; and various clinics, etc.

UNIVERSITY OF MARBURG.

ANY one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following:

1. A *curriculum vitae*; 2. A certificate of scientific studies; 3. A certificate of at least four years' study at a recognised University or Medical College; 4. A dissertation in the German language. If these be considered satisfactory by the Faculty, the candidate is then admitted to a *vivâ voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed, at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost for the diploma is 330 marks (16l. 10s.)

The following are the professors in the Medical Faculty of this University. *Ordinary Professors*: C. F. von Heusinger, History of Medicine; H. Nasse, Physiology; W. Roser, Surgery; R. Böhm, Medicine; R. Dohrn, Midwifery; N. Lieberkühn, Anatomy; F. W. Beneke, Pathological Anatomy and General Pathology; E. Mannkopf, Pathology and Therapeutics; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology; E. E. Külz, Physiology. *Extraordinary Professors*: G. Wagener, Anatomy; H. Horstmann, Forensic Medicine; H. Lahs, Midwifery. Lectures are also given in the Physiological Faculty by—*Ordinary Professors*: C. Zwenger, Pharmaceutical Chemistry; A. Wiegand, Botany; R. Greeff, Zoology; T. Zincke, Chemistry.

A hospital and various laboratories, etc., for practical instruction are connected with the University.

UNIVERSITY OF MUNICH.

IN granting medical degrees at this University, a distinction is made between those candidates who have already passed a satisfactory public examination as Physicians, before a German Commission of Examiners, and those who have not, be they natives or foreigners. From those candidates who have already passed the satisfactory German examination, nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Faculty requires, however, the presentation of a dissertation, written in either the Latin or German language. This is delivered by the Dean to one of the members of the Faculty for examination and judgment, and with his judgment it is circulated amongst the Faculty. If the Faculty approve of it, then it is printed, at the expense of the candidate, for the members of the Faculty.

Candidates, however, who have not passed the German 'Approbation-examination' for Physicians must, before being admitted to the doctorate examination, present to the Medical Faculty the fol-

lowing: 1. A Gymnasial certificate, or at least such certificate as shows that the candidate has enjoyed a regular education; 2. Certificates of at least four years' attendance at a university or medical institution, and of attendance at the lectures on the principal branches of natural science and medicine; 3. Clinical certificates of the treatment of an internal surgical and eye complaint, and also assistance at a birth; 4. A certificate of the performance of an operation on the dead body, and the application of a bandage; 5. The candidate must then pass a two hours' verbal examination (in the German language) in the following branches, viz.: Anatomy, Physiology, General Pathology and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, Diseases of the Eye; 6. The candidate has also to give in a dissertation, which must be examined by a member of the Faculty to see whether it is worthy of being printed. The printing may be dispensed with at the request of the candidate; 7. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers*, 300 *marks*, or 175 *florins* (15*l.*).

The professorial staff of the Medical Faculty of this University is constituted as follows. *Ordinary Professors*: F. X. von Gietl, Medicine; F. C. von Rothmund, Surgery and Clinical Surgery; C. T. von Siebold, Zoology and Comparative Anatomy; F. Seitz, Materia Medica; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; W. F. C. von Hecker, Midwifery; J. N. von Nussbaum, Surgery and Clinical Surgery; A. von Rothmund, Ophthalmic Surgery; C. von Voit, Physiology; H. von Ziemssen, Special Pathology and Therapeutics; B. von Gudden, Psychology; C. Kupffer, Anatomy; N. Rüdinger, Anatomy; O. Bollinger, Pathology and Hygiene. *Extraordinary Professors*: H. Ranke, Medicine; J. Amann, Midwifery; A. Martin, State Medicine; J. Oertel, Laryngoscopy; H. von Bock, Toxicology; J. Bauer, Medicine. Instruction is also given in the Philosophical Faculty by—*Ordinary Professors*: G. von Jolly, Experimental Physics; C. T. von Siebold, Comparative Anatomy; C. W. von Nägeli, Botany; L. Radlkofer, Botany; A. Bäyer, Chemistry. *Extraordinary Professors*: J. Ranke, Physiology; E. Fischer, Chemistry.

The University, which is situated in the Ludwigstrasse, and contains a library consisting of 500,000 volumes. The chemical laboratory for hygiene is under the direction of Professor von Pettenkofer.

UNIVERSITY OF ROSTOCK.

WHOEVER wishes to graduate as 'Medicinae, Chirurgiae, et Artis Obstetriciae Doctor' at this University, must apply to the Dean of the Medical Faculty, and deliver to him the following documents. 1. A certificate of having gone through the requisite course of studies in a university. 2. A certificate of examination, testifying to the ability of the candidate in the practice of medicine. 3. A treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty at the same time, of which two-thirds will be returned provided the treatise is not deemed satisfactory. The proof of having passed a satisfactory examination in Germany is, under the circumstances, satisfactory. If, however, this document should not appear satisfactory, or cannot be presented at all, the Faculty require that the candidate be subjected to an examination by the Faculty which shall pretty nearly cor-

respond to the German States' Examination. For this examination, an additional sum of 200 marks must be paid to the Faculty. Only for special cases does the Faculty reserve to itself a special form of examination.

The inaugural dissertation must be the candidate's own, and he must append to his treatise a written declaration to that effect. It is not, however, required that the work be composed entirely without assistance; but in this case the literary resources, and also the name of him or them from whom he has received help, must be clearly and distinctly stated. Those essays are considered the best which contribute most to medical or scientific knowledge. After the dissertation has been stamped by the Dean in the name of the Faculty, the same must be printed, at the expense of the author, and at least 125 copies delivered to the Faculty. When the candidate has satisfactorily fulfilled the above conditions, he must introduce his essay, and read it publicly in the Aula, and defend it against any objections that may be made.

Promotions *in absentia* cannot be made, except only in the case of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following *Ordinary Professors*: H. Stannius; T. Thierfelder, Special Pathology and Therapeutics; H. R. Aubert, Physiology; W. von Zehender, Ophthalmology; F. Schatz, Midwifery; F. S. Merkel, Anatomy; O. Nasse, Chemistry; O. W. Madelung, Surgery; A. Thierfelder, Pathological Anatomy. *Extraordinary Professor*: J. Uffelmann, Medicine. In the Philosophical Faculty, lectures on subjects connected with medicine are delivered by—*Ordinary Professors*: J. Roeper, Botany; O. Jacobsen, Chemistry; A. Götte, Comparative Anatomy and Zoology; and L. Matthiessen, Experimental Physics.

UNIVERSITY OF STRASBURG.

THE following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine.

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions. *a.* If he belong to the German empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By an unanimous decision of the Faculty, one or two Sessions may be omitted. Foreigners desirous of graduating are not required to have passed through the four years' course if they produce proof of having received instructions equivalent to the course of study in the Medical Faculty of Germany. *b.* He must present a scientific essay (dissertation) composed by himself. *c.* He must undergo the Faculty examination. *d.* He must pay the prescribed fee of 240 marks. In his application for graduation, which must be addressed to the Dean, the candidate must produce the evidence referred to in *a*, and forward a scientific memoir in some department of medicine, with a written assurance that it is absolutely his own composition. If the dissertation receive the approval of the Faculty, the candidate is admitted to examination.

The examination is conducted by the ordinary professors, and consists, as a rule, of an oral theoretical examination in all important departments of medicine. If the candidate fail to give satisfaction in the oral examinations, he must, in order to obtain the degree of doctor, again undergo the

examination after a time to be determined by the Faculty, but he is not required to present a second dissertation. In the case of candidates who have already passed the State examination, a colloquy before three members of the Faculty may, by the unanimous decision of the Faculty, be substituted for the oral examination.

Degrees in Medicine are not conferred on absent candidates.

If the dissertation be rejected, the candidate receives the whole fee back. If the dissertation be approved, but the candidate fail in the examination, 90 marks are returned to him, but, when he is again admitted to examination, only half that fee is required. After the Faculty examination has taken place and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma, the names of the successful candidates being announced. The candidate has to bear the expense of printing the dissertation and of the diploma. There is no public ceremony, and no oath is administered.

Matriculation takes place on the first four Wednesdays of the season, from twelve to one o'clock. After the end of these four weeks, the rector can allow matriculation only on special grounds. Any one desirous of matriculating as a student, and attending the lectures and other instructions given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University, in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then at once communicate with the Secretary of the University.

The following are the professors and teachers of the University. *Ordinary Professors*: W. Waldeyer, Human Anatomy and Embryology; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology, and Histology; A. Kussmaul, Medicine and Clinical Medicine; A. Lücke, Surgery and Clinical Surgery; W. A. Freund, Obstetrics and Gynaecology; F. Wiegner, History of Medicine, Diseases of the Skin, and Syphilis; A. Aubenas, Obstetrics and Gynaecology; F. Jolly, Psychiatry; L. Laqueur, Diseases of the Eye. *Extraordinary Professors*: O. Kohts, Medicine and Diseases of Children; A. Kuhn, Diseases of the Ear. There are also several *doctors*. Instruction in subjects connected with Medical Science is also given in the Faculty of Mathematics and Natural Science by the following—*Ordinary Professors*: O. Schmidt, Comparative Anatomy; A. de Bary, Botany; A. Kundt, Experimental Physics; R. Fittig, Experimental Chemistry. *Extraordinary Professors*: F. Rose, Practical Chemistry; C. F. Braun, Physics.

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis, and diseases of the skin.

UNIVERSITY OF TÜBINGEN.

THE Faculty of Medicine here grants a degree in Medicine under the following conditions.

1. The candidate must send in with his application—*a.* A *curriculum vitæ*; *b.* A certificate of

having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; c. Proof of a sufficient study of medicine at a university, and certificates of having attended the lectures having reference to the subjects of examination. 2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medicine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentia*. 3. In the written examination will be put one question in each of the following subjects: 1. Anatomy; 2. Physiology; 3. Materia Medica; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to which, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery. 4. The fees amount to 300 marks, including the printing of the diploma, which fee must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees will be returned. If he be rejected after the verbal one, only half will be returned. 5. The candidate must compose a dissertation under the presidency of a member of the Faculty, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors*: P. Bruns, Surgery; K. von Vieroret, Physiology; J. von Säxinger, Midwifery; C. von Liebermeister, Medicine and Materia Medica; T. H. Jürgensen, Medicine and Diseases of Children; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy; E. Ziegler, Pathology. *Extraordinary Professors*: O. Oesterlen, Forensic Medicine and Hygiene. Lectures are also given on subjects connected with Medicine in the Faculty of Natural Science by—*Ordinary Professors*: F. von Reusch, Experimental Physics; T. Eimer, Zoology; C. G. Hüfner, Chemistry; L. Meyer, Chemistry; W. Pfeffer, Botany; and *Extraordinary Professor*: Hegelmaier, Botany.

A hospital and institutions for practical instruction are connected with this University.

UNIVERSITY OF WÜRZBURG.

BEFORE being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must pass the medical approbation examination, which consists in showing—by testimonials or certificates—that he has a good moral character, and that he has passed through four years' study at an University, six sessions of which must have been devoted to medical studies. Upon fulfilment of these conditions, the candidate will be admitted to a written and *viva voce* examination, before which, however, he must pay to the Faculty 300 marks (£15). The written examination consists in the composition of an essay on some subject in theoretical or practical medicine, which dissertation must be handed to the Dean, who will give it to

one of the examining professors to report on. It is customary for the dissertation to be printed. If the decision of the reporter with regard to the theme be unfavourable, admission to the *viva voce* examination is denied, and another theme must be composed and handed in at a future time. Should the second theme, however, be deemed unsatisfactory, the candidate will not be allowed to reappear. He then receives back all his fees except 30 marks. If the dissertation be approved by the Faculty, the candidate is admitted to a *viva voce* examination, in the German language, which consists of the following subjects: Anatomy and Pathological Anatomy, Physiology, Pathology and Medicine, Special Therapeutics, Surgery, Obstetrics and Ophthalmology. A knowledge also of Psychology and State Medicine is required. After taking the examination oath, the result and standing of the examination is imparted to the candidate by the Dean—whether very good, good, or moderate.

When the candidate is unsuccessful at the *viva voce* examination, he receives back half the fees, and is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more attempt is, however, allowed after the first rejection at the *viva voce* examination.

After successful examination, the candidate receives his diploma of doctor.

In this University, the Medical Faculty consists of the following professors, with several *docents*. *Ordinary Professors*: F. von Rinecker, Syphilis and Diseases of the Skin, also Psychiatry; A. von Kölliker, Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; (vacant), Surgery and Clinical Surgery; A. Fick, Physiology; C. Gerhardt, Medicine and Clinical Medicine, and Diseases of Children; G. E. Rindfleisch, Pathological Anatomy, General Pathology, and History of Medicine; J. Michel, Ophthalmic Surgery; A. Geigel, Clinical Medicine and Hygiene; M. Rossbach, Materia Medica. *Extraordinary Professors*: A. F. von Troltsch, Aural Surgery; W. Reubold, Forensic Medicine. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors*: J. Sachs, Botany; J. Wislicenus, Chemistry; C. Semper, Zoology; F. Kohbrausch, Experimental Physics; and—*Extraordinary Professor*: L. Medicus, Chemistry.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

THE Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are: Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Lemberg (Galicia), Pesth (Hungary), Prague (Bohemia), and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practise medicine in the empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters*: the others are summer *semesters*.) 1st *Semester*: Systematic Anatomy; Experi-

mental Physics, Inorganic Chemistry; General Botany; Dissections. 2nd *Semester*: Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemical Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester*: Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester*: Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester*: General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester*: Pathological Anatomy (second part); Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester*: Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; Diseases of the Eye; Exercises in Surgical Anatomy; (Operations). 8th *Semester*: Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester*: Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynaecology; Forensic Medicine; (Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester*: Clinics of Diseases of Children; of Diseases of the Skin; and of Syphilis; (Obstetrics and Gynaecology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (a) his certificate of birth or baptism, and evidence (b) of having received a sufficient preliminary education in one of the institutions of the countries comprised in the empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (c) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (d) of having passed, at one of the Universities of the empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination, he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session; and of having passed the first examination.

The first examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination on Anatomy and Physiology, and a theoretical examination on all four subjects.

The second examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology, Pharmacology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside); and theoretically in all the subjects.

The third examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women,

and Forensic Medicine. The examinations in surgery, Ophthalmic Surgery, and Midwifery, are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a President, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner; and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examination, he may present himself again at the end of six months; if again rejected, six months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may re-appear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, whether in practice or in theory, with the sanction of the minister of public instruction, and the consent of the college of professors; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

UNIVERSITY OF VIENNA.

In this University, the Medical Faculty is constituted as follows. *Ordinary Professors*: E. von Brücke, Physiology; F. von Arlt, Ophthalmic Surgery; E. Albert, Practical and Clinical Surgery; C. Langer, Descriptive and Topographic Anatomy; C. R. Braun von Fernwald, Theory and Practice of Midwifery; H. von Bamberger, Special Medical Pathology, Therapeutics, and Clinical Medicine; H. Kundrat, Pathological Anatomy; H. Nothnagel, Special Medical Pathology and Therapeutics, and Clinical Medicine; J. Späth, Theory and Practice of Midwifery; C. Stellwag von Carion, Ophthalmic Surgery; Th. Billroth, Practical and Clinical Surgery; G. Braun, Midwifery (for Midwives); E. Hofmann, Forensic Medicine; I. Neumann, Syphilology; C. Wedl, Histology; S. Stricker, Experimental and General Pathology and Therapeutics; T. Meynert, Psychiatry and Nervous Diseases; A. E. Vogl, Pharmacology and Pharmacognosy; E. Ludwig, Chemistry; M. Kaposi, Diseases of the Skin, and Syphilis. *Extraordinary Professors*: E. Jäger von Jaxthal, Ophthalmic Surgery; J. Seegen, Balneology; C. Cessner, Use of Instruments and Bandages; H. Zeissl, Syphilology; M. F. Röhl, Contagious Diseases; L. Schlager, Psychiatry; F. Müller, Veterinary Medicine; L. Dittel, Surgery; H. Widerhofer, Diseases of Children; M. Liedes-

dorf, Psychiatry; M. Schwanda, Medical Physics; M. Benedikt, Electro-Therapeutics and Neuro-Pathology; S. Stern, Elementary Clinical Instruction; A. Politzer, Aural Surgery; J. Grüber, Aural Surgery; J. Weinlechner, Surgery; G. Löbel, Clinical Medicine; S. L. Schenk, Embryology; A. Drasche, Epidemiology; A. R. von Mosetig-Moorhof, Surgery; J. Nowaf, Hygiene; C. Stoerk, Laryngoscopy; L. von Schrötter, Diseases of the Chest and Larynx; H. Auspitz, Diseases of the Skin and Syphilis; F. Salzer, Surgery; S. Exner, Physiology; M. Rosenthal, Diseases of the Nervous System; C. Mayrhofer, Midwifery and Gynaecology; G. Wertheim, Diseases of the Skin and Syphilis; S. von Basch, Experimental Pathology; T. Puschmann, History of Medicine; J. Schnitzler, Medicine; R. Chrobak, Gynaecology; K. von Rokitsky, Pathology; L. Bandl, Obstetrics and Gynaecology; E. von Stoffella, Special Pathology and Therapeutics. The following private teachers have the title of professor: A. Reder, Syphilis and Diseases of the Skin; L. Mauthner, Ophthalmic Surgery; C. Böhm, Surgery; L. M. Pollitzer, Diseases of Children; W. Winternitz, Medicine. There are also between eighty and ninety private teachers, adjuncts, and assistants. In the Philosophical Faculty, lectures on subjects connected with medicine are given by—*Ordinary Professors*: K. von Brühl, Zoology; L. K. Schmarda, Zoology; K. Claus, Zoology and Comparative Anatomy; J. Stefan, Physics; V. von Lang, Physics; J. Loschmidt, Physics and Chemistry; J. Wiesner, Vegetable Anatomy and Physiology; A. Lieben, Chemistry; L. Barth von Barthenau, Chemistry; A. Korner von Marilaun, Botany; J. Böhm, Botany. *Extraordinary Professors*: H. W. Reichardt, Botany; F. Brauer, Chemistry; F. Exner, Physics; E. Lippmann, Chemistry; E. von Somaruga, Chemistry.

The General Hospital (*Allgemeine Krankenhaus*) is capable of accommodating about 2,000 patients. There are two medical clinics, under Professors Duchek and von Bamberger; two surgical clinics, one of which is under Professor Billroth; a clinic for Diseases of the Eye, under Professors von Arlt and Stellwag von Carion; and three clinics for Obstetrics—two for students being under the charge of Professors Carl Braun-Fernwald and Späth, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Späth. There are also special clinics for Syphilis, under Professor Sigmund; for Laryngoscopy, under Professor Schrötter; for Diseases of Children, under Professor Widerhofer; for Psychology, under Professor Meynert; and for Otology, under Professor Grüber. A considerable portion of the school is also situated within the hospital; thus there are the Pathological Museum and *post mortem* room, under the direction of the professor of Pathology; the room for medico-legal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Professor Langer; the Physiological Institute, where the Practical Physiology is carried on under Professor Brücke; the Materia Medica Museum, and the Medical Library are outside the hospital, in the Alsergrund.

The great clinics on medicine, surgery, etc., are conducted during the two sessions, from the middle of October to the middle of March, and from the

middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves. Clinical instruction on children's diseases is given at the St. Anne's Hospital. This and many other of the courses are often attended by students for a second or even third time. A student desirous of occupying his time to the best advantage at Vienna must be prepared to expend a considerable sum in fees.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former, the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Institution for the Sick (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Asylum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstadt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), etc.

UNIVERSITY OF BUDA-PESTH.

THE Medical Faculty of this University consists of the following professors. *Ordinary Professors*: J. Lenhossek, Anatomy; G. Mihalkovics, Anatomy; G. Scheuthauer, Pathological Anatomy; E. Jendrassik, Physiology; K. Balogh, Pharmacognosy and General Pathology; T. A. Lumnitzer, Surgery; T. Kézmarszky, Obstetrics; J. Wagner and F. Koranyi, Medicine and Clinical Medicine; J. Kovacs, Surgery; W. Schulek, Ophthalmic Surgery; (vacant), Forensic Medicine; J. Fodor, Hygiene; J. Bókai, Diseases of Children; T. Margó, Histology; A. Török, Anthropology. *Extraordinary Professors*: L. Gebhardt, Diseases of the Chest; E. Poor, Diseases of the Skin; E. Navratil, Rhinoscopy and Laryngoscopy; T. Bakody, P. Plósz, Physiological and Pathological Chemistry; D. Nadelko, Dental Surgery; J. Böke, Aural Surgery; E. Schwimmer, Diseases of the Skin and Syphilis; C. Laufenauer, Psychiatry. There are several *do-*
cents.

UNIVERSITY OF CRACOW.

THE Medical Faculty of this University consists of the following professors, with several *do-*
cents. *Ordinary Professors*: E. Korczynski, Special Pathology and Therapeutics; — Rydygier, Surgery; J. Mikulicz, Surgery; G. Piotrowsky, Physiology and Histology; L. Teichmann, Descriptive Anatomy; M.

Madurowicz von Jelita, Midwifery and Gynæcology; S. Janikowski, Forensic Medicine; L. Rydel, Ophthalmic Surgery; A. Stopczanski, Medical Chemistry; A. Adamkiewicz, General and Experimental Pathology; L. Blumenstock, Forensic and State Medicine; T. Browicz, Pathological Anatomy. *Extraordinary Professors*: A. Rosner, Diseases of the Skin and Syphilis; J. Oettinger, History of Medicine; M. L. Jakubowski, Diseases of Children; S. Domanski, Diseases of the Nervous System. There are also several *privat-docents* and assistants.

UNIVERSITY OF GRATZ.

IN this University, the Medical Faculty consists of the following professors, with about 12 *docents*. *Ordinary Professors*: A. Schauenstein, Forensic Medicine; E. Zuckerkandl, Descriptive and Topographical Anatomy; K. von Rzehaczek, Surgery; C. von Helly, Midwifery and Gynæcology; A. Rollett, Physiology and Histology; C. Blodig, Ophthalmic Surgery; O. Rembold, Medicine; J. Eppinger, Pathological Anatomy; C. von Schroff, *Materia Medica* and Therapeutics; C. B. Hoffmann, Medical Chemistry; V. von Ebner, Histology and Embryology; R. von Krafft-Ebing, Psychiatry. *Extraordinary Professors*: J. von Koch, Epidemic Diseases and Sanitary Police; E. Lipp, Diseases of the Skin; R. Klemensiewicz, Experimental and General Pathology; E. Börner, Obstetrics and Gynæcology.

Connected with the University are anatomical, physiological, pathological, and zoological institutes; medical, surgical, ophthalmic, obstetric, and gynaecological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, etc. The hospitals are: the general hospital (700 beds); a lying-in hospital (120 beds); the town hospital (80 beds); a children's hospital (80 beds); and two infirmaries (245 beds).

UNIVERSITY OF INNSBRUCK.

THE following professors belong to the Medical Faculty. *Ordinary Professors*: M. Holl, Anatomy; F. Schauta, Obstetrics and Gynæcology; A. Tschurtschenthaler, General Pathology and Pharmacology; M. von Vintschgau, Physiology; F. Schott, Pathological Anatomy; C. Nicoladoni, Clinical Surgery; I. Schnabel, Ophthalmic Surgery; P. von Rokitsansky, Medicine; W. Löbisch, Medical Chemistry. *Extraordinary Professors*: F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology; M. Dietl, Experimental Pathology.

The ordinary laboratories, clinics, and other means of practical instruction, are possessed by this University. There are a general hospital (204 beds) and a lying-in hospital (130 beds).

UNIVERSITY OF KLAUSENBURG.

THE Medical Faculty of this University consists of the following professors. *Ordinary Professors*: L. Davida, Anatomy; F. Klug, Physiology; A. Genersich, Pathology; A. Högyes, Pharmacy; S. Purjesz, Medicine; J. Brandt, Surgery; A. Szilágyi, Ophthalmic Surgery; J. Maizner, Obstetrics; A. Ajtai, Forensic Medicine; E. Geber, Diseases of the Skin and Syphilis; Rózahegyi, Hygiene. *Extraordinary Professor*: J. Ossikovsky, Chemistry and Toxicology.

UNIVERSITY OF PRAGUE.

THE Medical Faculty of this University consists of the following professors, with several *docents*. *Ordinary Professors*: Th. Eiselt and A. Pribram, Clinical Medicine; C. Gussenbauer, Surgery and General Surgery; J. Halla, Clinical Medicine; J. Streng, Midwifery; S. Strupi, Veterinary Medicine; J. Hasner von Artha, Ophthalmic Surgery; Ph. Knoll, General Pathology and Therapeutics; J. Maschka, State Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; A. Breisky, Midwifery; C. Toldt, Anatomy and Histology. *Extraordinary Professors*: J. Lerch, Forensic, Physiological, and Pathological Chemistry; G. Ritter von Rittershain, Diseases of Children; J. Kaulich, Diseases of Children; S. Mayer, Physiology; P. J. Pick, Skin Diseases and Syphilis; E. Zaufal, Aural Surgery; J. Fischel, Psychiatry; H. Chiari, Pathological Anatomy; W. Weiss, Surgery; C. Weil, Surgery; O. Kahler, Special Pathology and Therapeutics; F. Ganghofner, Special Pathology and Therapeutics; A. Ott, Special Pathology and Therapeutics.

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic and dermatological clinics (one of the medical clinics being Bohemian); obstetric clinics for practitioners and for midwives, etc. The hospitals are: the General Hospital (948 beds), with the affiliated Hospital of the Bohemian sisters (220 beds); the Franz-Josef Children's Hospital (100 beds); the Israelite General Hospital (52 beds); the Hospital of the Brothers of Mercy (166 beds); the Hospital of the Elizabethan sisters (60 beds); the Public Lunatic Asylum (1,348 beds); the Lying-in Hospital (322 beds for mothers and 176 for children).

SWITZERLAND.

GRADUATION IN MEDICINE.

IN Switzerland, degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practice, for which a separate examination is required.

UNIVERSITY OF BASLE.

THE degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained with the fulfilment of the following conditions.

1. Application for admission to the examination must be made to the Dean of the Faculty, in writing, enclosing: *a. A curriculum vitæ*; *b. The academical matriculation of this place*; *c. Certificates of attendance at the academical lectures*; *d. A certificate of conduct from the High School in which the candidate has made his principal studies*; *e. A scientific treatise on any subject he chooses within the sphere of medical or natural science.*
2. The examination is partly written (*tentamen*) and partly verbal (*rigorosum*).
3. The written examination consists in the answering of five questions having reference to Anatomy, Physiology, Pathological Anatomy and Pathological Physiology, Special Pathology and Therapeutics, and Surgery.
4. In case of rejection, the Faculty can appoint a time for

a repetition of the examination, before which time the candidate cannot be re-examined. 5. The whole of the professors of the Faculty are invited to the verbal examination. The following are the subjects: Anatomy, Physiology, Pathological Anatomy and Physiology, Special Pathology and Therapeutics, *Materia Medica*, Surgery, Midwifery. 6. The examination by one examiner must not last longer than half an hour. The degrees in which doctorships are granted are *Summa cum laude*, *Insigni cum laude*, *Magna cum laude*, *Cum laude*, and *Rite*. 8. In adjudicating on both the written and verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of a general scientific knowledge, and especially a comprehensive knowledge of Natural Science. 9. One hundred and twenty copies of the treatise must be delivered to the Faculty. 10. Promotions are not granted to applicants who have not passed the examinations here; but the Faculty can confer the degree of doctor on notable and eminent physicians *honoris causa*. 11. The fees for the examination amount to 350 francs, viz., 100 for the *tentamen*, 200 for the *rigorosum*, and 50 for the promotion. 12. If the candidate be rejected after either examination, he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University. *Ordinary Professors*: F. Miescher, senior, Pathological Anatomy; L. Rüttemeyer, Comparative Anatomy and Zoology; A. Socin, Surgery and Clinical Surgery; H. Immermann, Medicine and Clinical Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynaecology; F. Miescher, junior, Physiology and Physical Chemistry; M. Roth, General Pathology and Pathological Anatomy; L. Wille, Psychiatry; H. Schiess, Ophthalmic Surgery. *Extraordinary Professors*: I. Hoppe, Therapeutics; E. Hagenbach-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing; A. Burckhardt-Merian, Diseases of the Ear; C. Schulin, Histology. There are also several private teachers. Lectures on subjects connected with Medicine are given in the Mathematical and Scientific Department of the Philosophical Faculty by—*Ordinary Professors*: E. Hagenbach-Bischoff, Experimental Physics; J. Piccard, Chemistry; and H. Vöchting, Botany. *Extraordinary Professor*: F. Krafft, Chemistry.

Connected with the University are the town hospital, where clinics for medicine, surgery, diseases of the eye, mental diseases, and midwifery are conducted; a hospital for diseases of children, and institutions for practical instruction in physiology, pathology, chemistry, and botany.

UNIVERSITY OF BERNE.

BEFORE admission to examination for the Degree in Medicine and Surgery, the candidate must submit to the Faculty of Medicine a manuscript dissertation of scientific value. If this be accepted, he must, after producing evidence of general, scientific, and medical education, be examined *vivâ voce* in Anatomy, Physiology, Pathological Anatomy, Legal Medicine, General Pathology and Medicine, Surgical Pathology and Surgery, *Materia Medica*, and Ophthalmology.

The Medical Faculty of this University is constituted of the following professors and about thirteen *docents*. *Ordinary Professors*: P. Grützner, Physiology; C. Emmert, Forensic Medicine and Hygiene; C. Aeby, Human and Comparative Anatomy; T.

Kocher, Surgery; T. Langhans, Pathological Anatomy; L. Lichtheim, Medicine; P. Müller, Midwifery; A. Vogt, Hygiene; E. Pflüger, Ophthalmic Surgery; M. von Nencki, Physiological Chemistry. *Extraordinary Professors*: E. Schärer, Psychiatry; R. Demme, Diseases of Children. There are several private teachers. Instruction in subjects connected with medicine is also given in the Mathematical and Scientific Department of the Philosophical Faculty by—*Ordinary Professors*: V. Schwarzenbach, Chemistry and Pharmacy; L. Fischer, Botany; A. Forster, Experimental Physics; T. Studer, Zoology.

Medical, surgical, obstetric, and special clinics, and physiological, pathological and clinical laboratories, etc., are connected with the University.

UNIVERSITY OF GENEVA.

THE University of Geneva grants the degrees of Bachelor in Medical Science and Doctor of Medicine.

The following classes of persons are admitted as students in the Faculty of Medicine: 1. Bachelors in Letters; 2. Bachelors in Science; 3. Students who have attended during two years' lectures in the Section of Philosophy, and have undergone the examinations at the end of each year; 4. Pupils from the Classical Section of the Gymnasium, with certificates of Studies; 5. Swiss and strangers who give evidence of their studies by means of diplomas or certificates; 6. Persons who undergo satisfactory oral examinations in the subjects comprehended in the classical section of the Gymnasium. 7. Persons who furnish evidence that they have studied abroad, for a year at least, in a corresponding faculty, may be inscribed in the Faculty of Medicine.

The course of study is as follows: *First Year: Winter Session*: Botany (first part); Physics (first part); Comparative Anatomy or Zoology; Inorganic Chemistry; Practical Comparative Anatomy. *Summer Session*: Botany (second part); Physics (second part); Comparative Anatomy or Zoology; Organic Chemistry (first part); Practical Chemistry; Botanical Excursions. *Second Year: Winter Session*: Descriptive Anatomy (first part); Physiology (first part); Organic Chemistry (second part); Dissections. *Summer Session*: Descriptive Anatomy (second part); Physiology (second part); Practical Chemistry and Practical Comparative Anatomy. (Students are recommended to attend, in addition, courses of other subjects, such as Astronomy, Geography, Physics, Mineralogy, Geology, etc.) *Third Year: Winter Session*: Descriptive Anatomy (third part); Normal Histology; Dissection. *Summer Session*: Regional Anatomy; Embryogeny. Supplementary courses on subjects of the preceding years, on which the student's knowledge is weak; Practical Physiology, Histology, Comparative Anatomy, and Chemistry. (The examination for Bachelor in Medical Sciences is now undergone.) *Fourth Year: Winter Session*: General Pathology; Internal Pathology; External Pathology; Dissection of Regions; Medical and Surgical Hospital Practice. *Summer Session*: Special Pathological Anatomy; Pathological Histology; Internal Pathology; External Pathology; Pharmacology; Medical and Surgical Hospital Practice; Exercises in the Laboratory of Pathological Histology. *Fifth Year: Winter Session*: Therapeutics; Hygiene; Legal Medicine; Theory of Obstetrics; Internal Pathology; External Pathology and Operations; Medical and

Surgical Hospital Practice. *Summer Session*: Therapeutics; Legal Medicine; Internal Pathology; External Pathology; Medical and Surgical Hospital Practice; Operations. *Sixth Year*: *Winter and Summer Sessions*: Medical, Surgical, and Obstetrical Hospital Practice; Polyclinic; Ophthalmology; Psychology, etc. Repetitions preparatory to the examination for the Doctorate.

Persons who have satisfied the conditions laid down regarding the admission of students to the Faculty of Medicine may become candidates for the degree of Bachelor in Medical Science. Students who have undergone the recognised annual examinations in the Faculty of Medicine or of Sciences are exempt from oral examinations in the subjects in which they have already been examined; provided that the examinations have been undergone not more than two years previously. Persons who produce diplomas or certificates giving evidence of their studies may be exempted from further examinations in the subjects in which they have already passed.

The following may become candidates for the degree of Doctor of Medicine: 1. Bachelors in Medical Science; 2. Persons who produce diplomas or certificates indicating that they have gone through an equivalent course of study. There are five examinations for the degree of Doctor of Medicine. *First Examination*: Human Anatomy and Histology; Physiology; Pathological Anatomy and General Pathology; a Necropsy, for which one hour is allowed; making an Anatomical Preparation, for which four hours are allowed. *Second Examination*: Medicine; Surgery; Operative Surgery; three Operations, and Application of Bandages. *Third Examination*: Hygiene; Therapeutics; Materia Medica and Pharmacology; Legal Medicine; a Medico-Legal Report on a real or supposed case, for which one hour is allowed. *Fourth Examination*: Clinical Examination of two medical and two surgical patients and of one case of labour (fifteen minutes being allowed for each case); Obstetrics, with operations on the mannikin; Discussion on each Clinical Case; Written Commentary on a Medical and a Surgical Case, two hours being allowed. *Fifth Examination*: Defence of a Printed Dissertation, in the French language, on a subject in medical science chosen by the candidate, and previously communicated to the Faculty.

The examinations are public. Those for the degree of Bachelor are held at the beginning and end of the University year, and in the interval between the sessions. Application for admission must be made to the Dean of Faculty of Medicine eight days before the day of examination. The examinations for the degree of Doctor take place, on the demand of the candidates, at times determined by the Faculty.

Before being admitted to examination, each candidate pays to the beadle 40 francs; and after the last examination, 100 francs must be paid to the Faculty of Medicine. In case of unsatisfactory examination, half of the first fee is returned, and the second is not paid.

UNIVERSITY OF ZURICH.

THE following are the regulations for the degree of Doctor of Medicine.

1. In order to obtain the degree of Doctor of Medicine, the candidate must send to the Dean a written memorial, accompanied by (a) evidence of

attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects; (b) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the Dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance; in this case, his name appears on the title when it is printed. If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is only accepted if two-thirds of them give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination for the degree. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery, or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the second (oral) examination. The oral examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The votes of two-thirds of the members of the Faculty present is necessary for the passing of this examination.

4. After the examination has been passed and two hundred printed copies of the dissertation have been delivered, an official diploma is delivered in duplicate to the candidate; all other ceremonies are dispensed with.

5. The fee consists of 350 francs (£14), and 15 francs to the bedell; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitely rejected. The sum of 100 francs is remitted to candidates who already possess a recognised diploma; and, in such cases, the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

6. The faculty has the power of granting the diploma of doctor *honoris causâ* for distinguished services to medicine.

The Medical Faculty consists of the following Professors, with several *docents*: *Ordinary Professors*—H. Meyer, Human Anatomy; H. Frey, Comparative Anatomy, and Zoology; U. Krönlein, Surgery and Clinical Surgery; L. Hermann, Physiology; E. Klebs, Pathology; G. Huguenin, Medicine; F. Horner, Ophthalmic Surgery; O. Wyss, Diseases of Children; E. Frankenhäuser, Obstetrics and Gynecology; A. Forel, Mental Diseases. *Extraordinary Professor*—H. Spöndly, Obstetric Medicine. Lectures are given in the Philosophical Faculty by *Ordinary Professors*—V. Merz, Chemistry; C. Cramer, Botany; *Extraordinary Professors*—J. R. Hofmeister, Experimental Physics; A. Dudelort, Chemistry. A Hospital, Lying-in Hospital, Children's Hospital, Pathological, Physiological, and Chemical Laboratories, are connected with the University.

THE LICENCE TO PRACTISE MEDICINE.

The following are the regulations for the licence to practise medicine in Switzerland. One licensing body examines at Geneva, and the other at Basle, Berne, and Zürich; both have the same regulations, and grant the licence to practise in all parts of the republic.

There are two examinations, preliminary and final. At Geneva, candidates are admitted to the preliminary examination on producing one of the following certificates: 1. Bachelier ès lettres; 2. Bachelier ès sciences; 3. Certificates of having passed two examinations in the Section of Philosophy at Geneva, and of having previously taken not less than twenty hours per week of studies. 4. Certificates of foreign studies at the Classical Section of the Gymnasium at Geneva; 5. Certificates of foreign studies equivalent to those named above. At the Amalgamated Board of Basle, Berne, and Zürich, candidates must produce evidence of complete and satisfactory studies in a public school; and of attendance on courses of Anatomy, Chemistry, Physics, Physiology, Practical Physiology, and six months' work in a Chemical Laboratory.

The examination is written and oral. The written part consists in producing two dissertations, one in Physics or Chemistry, the other in Anatomy or Physiology. The oral examination comprises Botany, Zoology, and Comparative Anatomy, Physics, Anatomy, and Physiology. At Geneva, candidates who have passed this examination are entitled to the designation of Bachelor of Medical Science.

In order to be admitted to the Final Examination for the Licence, candidates at Geneva must produce the certificate of Bachelor of Medical Science, and diplomas and certificates obtained after equivalent studies and examinations elsewhere. At the other Board, they must produce evidence of having passed the Preliminary Examination, and of having attended the following academic courses: Pathological Anatomy, Medicine, Practical Surgery and Bandaging (six months), Clinical Medicine and Clinical Surgery (each three sessions), Clinical Midwifery (two sessions), and Clinical Ophthalmic Medicine (one session).

The examination is written, practical, and oral. The written and practical part consists of—1. Examination of two Medical and two Surgical cases, and one of Midwifery, in the presence of two examiners; 2. Written opinion of one of two Medical and two Surgical cases; 3. A *post mortem* Examination, and opinion on the same; 4. Performance of two Operations: one the tying of an artery; the other according to the judgment of the examiners. The *visû voce* examination comprises: 1. General Pathology and Pathological Anatomy; 2. Special Pathology and Therapeutics; 3. Hygiene; 4. Pharmacology; 5. Surgery; 6. Topographical Anatomy, with Operations; 7. Ophthalmology; 8. Midwifery; 9. Ordinary Medical Practice.

DENMARK.

MEDICAL EDUCATION & GRADUATION.

THE study of Medicine at the University of Copenhagen is open to any student who has matriculated there or in foreign Universities; but only Danish

subjects can obtain through examination the right to practise as medical men in the country.

The course of study is divided into three parts, namely, an introductory and two principal courses.

1. The introductory part consists of Botany (with especial regard to medicinal plants), Physics, Zoology, and Chemistry, theoretical and practical. The student has to submit to a preliminary examination on these subjects, and he can then enter as a pupil of one of the hospitals, where he must attend in a fixed order, and for a certain time, the various wards.

2. The second course comprises Anatomy, Physiology, Pharmacology, and Dissections, in which the student has to submit to an examination.

3. The final course consists of the following: Theoretical Surgery, Clinical Surgery, Operative Surgery, Theory of Medicine, Clinical Medicine, Pathological Anatomy, General Pathology, Forensic Medicine, and Obstetric Medicine. The student is examined on these subjects, and has to present a written thesis in Medicine, and one on Surgery. Before the student can pass his examination in this concluding course, he must present a certificate showing that he has gone through a half-yearly Clinical course of study under the chief Physicians at the hospital in Surgery, Medicine, Skin-Diseases, and Syphilis; and a shorter course at the Lying-in Institution in Obstetrics and Diseases of Children.

When these examinations are taken, the obligatory course of study is concluded by a residence at the Lying-in Institution, in order to obtain a practical knowledge of operations in cases of abnormal labours. The candidate who has passed his examination has now a right to practise medicine; but the majority of candidates, before commencing to practise, endeavour to obtain an appointment at one of the hospitals, where they do duty during two years in a subordinate position. The entire course of study generally covers a period of from six to seven years.

In order to obtain the degree of Doctor of Medicine, the candidate has to prepare and submit to the Medical Faculty a treatise on a medical subject chosen by himself. If it be accepted by the Faculty, it is printed, and must be defended by the author publicly at the University, when at least two professors of the Medical Faculty appear as opponents. At most only about 10 per cent. of the medical men in Denmark endeavour to obtain this degree.

Among other means for aiding the labours of the student at the University are: The Botanical Gardens, a Zoological Museum, a Chemical Laboratory, a Collection of Physical Instruments, an Anatomical Museum, Dissecting Rooms (Physiological Collection and Laboratory), Pharmacological Collection, Collection of Surgical Instruments, Pathological Museum, the Copenhagen hospitals and the Lying-in Institution.

No entrance fees are demanded, and all the lectures are free to the students. The fees payable in respect of the several examinations amount in all to 60 *Kroner* (about £3 10s.) The expenses in connection with obtaining the degree of Doctor of Medicine amount to 160 *Kroner* (about £9).

Ten professors are attached to the University, namely: two in Medicine (Theoretical and Clinical), two in Surgery (Theoretical and Clinical), one in Pathological Anatomy, one in Obstetric Medicine and Diseases of Women and Children, one in Nor-

mal Anatomy, one in Physiology, one in Pharmacology and Materia Medica, one in Forensic Medicine, Hygiene, and Psychiatry, beside a permanent *docent* for Syphilis and Skin-Diseases.

In addition, lectures are given by the chief physicians attached to the various wards of the hospitals. Six of the professors of the University act as chief physicians in the Copenhagen hospitals.

SWEDEN.

MEDICAL EDUCATION.

THERE are three medical institutions in Sweden which confer licences to practise, viz., in the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute or Academy of Medicine in Stockholm. The Universities also confer the degree of Doctor of Medicine. A Medical School, with professors of the various branches of medical science, is connected with each.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, physiological and pathological laboratories, etc.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic and obstetric cases.

In Lund, clinical instruction is given in the State Hospital, and also in the University Hospital. In the latter, there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction. The obstetric department is also clinical. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in Hospitals, the Town and State Lock Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital, there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynaecological ward. It contains about 300 beds. An ophthalmic clinic is comprised in the surgical department; and the gynaecological clinic is attached to the medical.

The Lying-in Hospital or Obstetric Clinic can accommodate 30 patients; 20 beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex officio* chief physician.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution is from 100 to 200; sometimes it has been as high as 240. Of these 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical Instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which, on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds, which are all available for clinical instruction. The professor of psychological medicine in the Karolina Institute is the chief physician.

LICENCE AND DEGREE IN MEDICINE.

No one can practise medicine in Sweden who has not obtained a licence from one of the three boards. The examinations for the licence consist of two parts. The first, for the Diploma of Candidate in Medicine (analogous to *Officier de Santé* in France), embraces Anatomy, Physiology, Medical Chemistry, Pharmacology, General Pathology, and History of Medicine. The candidate must, after passing the maturity examination on leaving a lyceum, have undergone a preliminary (medico-philosophical) examination in Botany, Zoology, Chemistry, and Physics, or have passed an examination as candidate in Philosophy. He must also have followed the practical laboratory courses of Chemistry, Physiology, and normal and morbid Anatomy. The examination for the licence comprises Medicine, Diseases of Children, Surgery, Obstetrics and Gynaecology, Pathological Anatomy, and Forensic Medicine. The candidate must have passed the examination for Candidate in Medicine, and must subsequently have attended the clinics of Medicine, Surgery, Obstetric Medicine, Diseases of Children, Syphilis, and Diseases of the Mind; and must have obtained a competent knowledge of Pharmacy. Attendance on oral lectures is not obligatory.

The degree of Doctor of Medicine is conferred by the Universities of Lund and Upsala on Licentiates of those Universities and of the Academy at Stockholm, on their presenting and defending a thesis. Attendance on lectures is obligatory for the Degree.

NORWAY.

MEDICAL EDUCATION.

IN the University of Christiania, which is the only School of Medicine in Norway, lectures are delivered on the following subjects: Surgery, Ophthalmic Surgery, Physiology, Midwifery and Diseases of Women and Children, Descriptive Anatomy, Forensic Medicine, Pathology and Therapeutics, Hygiene, Materia Medica, General Pathology and Pathological Anatomy, Surgical Pathology, Zoology, and Chemistry. Clinical instruction is given in the General Hospital on Surgery, Ophthalmic Surgery, Medicine, Diseases of the Skin and Syphilis; at the Lying-in and Children's Hospital, on the Diseases of Women and Children; at the Ganstead Asylum and at the Christiania Lunatic Asylum, on Mental Diseases; and in the Town Hospital, on Chronic Diseases. Practical instruction is also given in Chemistry, Anatomy, and Botany.

LICENSES AND DEGREES.

Before entering on the study of medicine, the candidate has to pass two preliminary examinations: one in Arts, including Norwegian, Latin, Greek, French, German, English, Mathematics, Geography, and History; and one in Philosophy, including Geometry, Zoology, Botany, Astronomy,

and the elements of Chemistry and Physics. Having passed these, he is admitted to matriculation, and afterwards studies Medicine nearly seven years.

There are three professional examinations. The first is held two and a half years after Matriculation, in Anatomy, Dissections, the use of the Microscope, Physiology, and Medical Physics. The second, held three and a half years after the first, includes Pharmacology, Toxicology, Medicine, Therapeutics, General Pathology, Pathological Anatomy, Surgery, Ophthalmic Surgery, Skin-Diseases, and Syphilis. The third examination, held about a year after the second, comprises Surgical Anatomy, Surgery, Operative Surgery, Obstetrics and Gynæcology, Diseases of Children, Forensic Medicine, Hygiene, and a Practical Examination in Medicine and Surgery. Practical work in the Hospital Wards is also obligatory.

On passing the final examination, the candidate becomes a physician, and obtains the right to practise. To obtain the degree of Doctor, he must pass a further examination, and defend a thesis.

HOLLAND.

DEGREE OF DOCTOR OF MEDICINE.

The degree of Doctor of Medicine is granted in Holland by the Universities of Groningen, Leyden, and Utrecht. Candidates for matriculation must produce evidence of gymnasial maturity, or undergo an equivalent examination. The course of study, including laboratory work and hospital practice, extends over six years. The final examination embraces all the subjects of medical study and the presentation and defence of a thesis. The degree does not grant a license to practise.

STATE EXAMINATION.

This examination is conducted by eight professors, appointed annually and paid by the government. The applicant for admission must be a Doctor of Medicine of some University, or possess a certificate of gymnasial maturity, or pass a preliminary literary and philosophical examination. The course of medical study must extend over at least six terms. The medical examination includes General and Special Pathology, Pharmacology, Morbid Anatomy, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery, and Obstetrics.

BELGIUM.

GRADUATION IN MEDICINE.

DEGREES in Medicine are granted by the Universities of Brussels, Ghent, Liège, and Louvain. The Universities of Brussels and Louvain confer only scientific titles, without license to practise; the degrees of the other two, when legalised by a Government commission, give the right of practice in Belgium.

UNIVERSITY OF BRUSSELS.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Resi-

dence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are, for inscription of name, 215 fr. (£8 12s.); for examinations, 315 fr. (£12 12s.); for registration of diploma, 10 fr. (8s.); total, 540 fr. (£21 12s.) The examination consists of three parts. 1. General Therapeutics, including Pharmacodynamics (proportions of doses), Special Pathology and Therapeutics of Internal Diseases, General Pathology, and Pathological Anatomy. 2. Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the *mannequin* (model of pelvis); Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, etc.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

Examinations take place at any time between October 15th and June 20th, except during Christmas and Easter. They are *vivâ voce* and written, but candidates may be exempted from the former and confine themselves to the written tests by paying an additional fee of £1 for each test. Candidates must exhibit their qualifications or diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving, for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English through the medium of an interpreter, for such candidates as are not familiar with the French language.

Candidates who are not foreign qualified medical men must undergo the above-mentioned examinations, and also an examination in Anatomy, Physiology, and Histology, and must produce a degree in Arts or Science from a recognised University, or pass a preliminary examination; they must also have attended for five years the lectures in a medical college, or for three years the medical and surgical practice of a hospital.

UNIVERSITY OF GHENT.

A CANDIDATE for matriculation at this University must be a graduate in Arts of some University, or must pass a preliminary examination. He must then attend for two years a scientific course, including, Psychology, Chemistry, Physics, Botany, Zoology, and Mineralogy, and at the end of the time pass an examination in these subjects. After this, he must attend lectures for five years, and hospital practice for three years.

The following examinations must be passed: 1. At the end of the second year of medical study, in Descriptive Anatomy, Histology, Physiology, Pharmacology, and Comparative Anatomy; 2. At the end of the fourth year, in General Pathology, Therapeutics, Theory and Practice of Medicine, and Morbid Anatomy; 3. At the end of the fifth year, in Theory and Practice of Surgery and in Obstetrics. The final examination for the Doctorate includes the

general subjects of medical study, with practical examinations in Clinical Medicine, Clinical Surgery, Obstetrics, and Operative Surgery. Candidates who have attended the requisite lectures and hospital practice elsewhere are admitted to the final examination if they possess a degree in Arts or pass the matriculation examination of the University.

UNIVERSITY OF LIÈGE.

THE University grants a degree in Medicine, Surgery, and Midwifery, which can only be obtained after passing three examinations, in the French language, in natural sciences and medical subjects.

The first examination includes the following subjects : General Chemistry, Logic, Psychology, Moral Philosophy, Experimental Physics, Elements of Zoology, Elements of Botany (comprising the medical category), Elementary Geology and Mineralogy. This is called the examination for candidates in natural sciences.

The second examination, which is for candidates in medicine, includes Elements of Comparative Anatomy, Descriptive and Regional Anatomy, Human Physiology, and Pharmacology.

The third examination, which, when successfully passed, entitles the candidate to the Doctorate, includes the following subjects, viz., General Pathology, Pathological Anatomy, Special Pathology and Therapeutics, Mental Maladies, General Therapeutics, Surgical Pathology and Ophthalmology, Theory and Practice of Midwifery (including operations), Public Hygiene, Legal Medicine, Clinical Medicine, Clinical Surgery, Surgical Operations.

The fees are—for the first examination, 80 fr.; second, 40 fr.; doctor in medicine, 240 fr.; total, 300 fr., or about £15.

UNIVERSITY OF LOUVAIN.

THIS University, before granting the usual degree, insists upon compliance with the following conditions, viz. : 1. An examination in one group (or branch) of the sciences, Mathematics, Physico-chemicals, or Natural Sciences. 2. An examination upon all medical subjects, in the French language.

Candidates for the degree of Doctor must have studied medicine five years at a recognised medical college or university, and have attended hospital practice for three years, at a recognised hospital.

The University of Louvain consists of several colleges, and the buildings of the Halles, and contains a library of 70,000 volumes.

ITALY.

GRADUATION IN MEDICINE.

THE Italian universities at which degrees in medicine are granted are Bologna, Catania, Padua, Palermo, Pavia, Pisa, Rome, Siena, and Turin. There is also a preparatory School of Medicine at Ferrara.

The regulations for Graduation in Medicine in the Universities of Italy are as follows.

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical

study extends over six years, at the end of which free license to practise is granted. 3. The following courses of instruction are obligatory : General Chemistry, Organic and Inorganic ; Botany ; Zoology, with Comparative Anatomy and Physiology ; Experimental Physics ; Normal Human Anatomy (*i.e.*, Histology, Descriptive and Topographic Anatomy, and Dissection) ; Human Physiology ; General Pathology ; Pathological Anatomy (demonstrations and exercises) ; Materia Medica and Experimental Pharmacology ; Special Medical Pathology (or Principles and Practice of Medicine) ; Special Surgical Pathology (Surgery) ; Clinical Medicine and Exercises in Semeiotics ; Clinical and Operative Surgery ; Theory and Practice of Ophthalmic Surgery ; Theory and Practice of Diseases of the Skin and Syphilis ; Midwifery and Clinical Midwifery ; Forensic Medicine and Public Hygiene ; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year ; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary ; Medical Chemistry ; Experimental Toxicology ; Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There shall be three biennial examinations in the Faculty of Medicine ; the first for 'promotion' ; the second for 'license' ; the third for the degree of 'laureate', with a diploma conferring full license to practise. 8. In the Universities of Pisa and Siena the licentiate shall have the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the Courses of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of examination shall be Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board shall consist of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty, and with the consent of the Minister, the examination for promotion may be divided into two parts, one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year, the Faculty shall determine what courses are to be followed and when. 11. The candidate for admission to the several examinations (license) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. 12. The Examining Board shall be composed of the official teachers of the subjects mentioned, with one or two assessors not belonging to the teaching body. The examination shall be oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the

courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Pathological Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body and two clinical examinations. 15. The examination on the dead body shall be conducted by a sub-committee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate will perform on the dead body a surgical operation, the nature of which will be decided by lot from a series prepared by the sub-committee. He will also perform a necropsy, and draw up a description of the appearances seen. Finally, he will answer the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of forensic medicine. 17. The first clinical examination will be conducted in the presence of a sub-committee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination the candidate will examine four cases of diseases selected from the four special classes, which have not previously been examined or treated in the clinical wards, and will give his opinion on the diagnosis, prognosis, and treatment. He will afterwards answer the questions and observations of the examiners, and especially will reply to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The several clinical examinations shall be conducted in the presence of a sub-committee, consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate shall examine, in the presence of the sub-committee, four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and shall write a description of the cases. He shall, finally, answer the questions asked by the examiners. 21. A student must have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may present himself for examination in this subject only on a future occasion; but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third examination having been passed, the three sub-committees unite to form a committee, presided over by the President of the Faculty, and will judge of the merits of the candidates. The successful candidates will be declared doctors in medicine and surgery, and the president will refer them to the Rector, in order that they may receive the diploma of laureate.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some noted foreign university, and must at the same time produce satisfactory proof that they have actually gone through all the studies and passed the examinations required for that degree. They must also pass the ordinary examinations for the medical degree, and pay the respective fees. The examinations are usually conducted in the Italian or the Latin language.

UNITED STATES OF AMERICA.

THE United States possess a very large number of institutions empowered by charter to grant the degree of doctor of medicine; there being, in some instances, special colleges and schools of medicine and surgery, and in others the medical departments of Universities. The subjoined list is taken from an interesting article on Literature and Institutions, by Dr. J. S. Billings, of the United States Army, published as a part of the *Century of American Medicine*. The dates indicate the years in which degrees in medicine were first conferred by the respective bodies.

Alabama.—Medical College of Alabama (Mobile): 1860.

California.—Medical College of the Pacific University (City) College (San Francisco): 1859.—University of California (San Francisco): 1865.

Connecticut.—Medical Department of Yale College (New Haven): 1814.

District of Columbia.—National Medical College, Medical Department of Columbian University (Washington): 1826.—Georgetown University (Washington): 1852.—Howard University (Washington): 1871.

Georgia.—Medical College of Georgia (Augusta): 1833.—Savannah Medical College: 1854.—Atlantic Medical College: 1855.

Illinois.—Rush Medical College, Medical Department of University of Chicago: 1844.—Chicago Medical College, Medical Department of Northwestern University: 1860.

Indiana.—Medical College of Evansville: 1850.—Indiana Medical College (Indianapolis): 1870.—Indiana College of Physicians and Surgeons (Indianapolis): 1875.

Iowa.—College of Physicians and Surgeons (Keokuk): 1850.—Iowa State University (Iowa City): 1871.

Kentucky.—University of Louisville: 1838.—Kentucky School of Medicine (Louisville): 1851.—Louisville Medical College: 1870.—Hospital College of Medicine, Medical Department of Central University (Louisville): 1875.

Louisiana.—University of Louisiana (New Orleans): 1835.—Charity Hospital Medical College of New Orleans: 1876.

Maine.—Bowdoin College and Medical School of Maine: 1821.

Maryland.—University of Maryland (Baltimore): 1811.—Washington University School of Medicine (Baltimore): 1828.—College of Physicians and Surgeons (Baltimore): 1873.

Massachusetts.—Harvard University (Boston): 1783.

Michigan.—University of Michigan (Ann Arbor): 1851.—Detroit Medical College, 1869.

Missouri.—Missouri Medical College (St. Louis): 1841.—St. Louis Medical College: 1843.—Kansas City College of Physicians and Surgeons: 1870.

New Hampshire.—Medical School of Dartmouth College (Hanover): 1798.

New York.—College of Physicians and Surgeons of the City of New York: 1769.—Albany Medical College: 1839.—University of the City of New York: 1842.—University of Buffalo: 1847.—Long Island College Hospital (Brooklyn): 1860.—Bellevue Hospital Medical College (New York): 1862.—College of Medicine of Syracuse University: 1873.

Ohio.—Medical College of Ohio (Cincinnati): 1821.—Starling Medical College (Columbus): 1836.—Cleveland Medical College: 1844.—Cincinnati College of Medicine and Surgery: 1852.—Miami Medical College (Cincinnati): 1853.—University of Wooster (Cleveland): 1865.

Oregon.—Willamette University (Salem): 1867.

Pennsylvania.—University of Pennsylvania (Philadelphia): 1768.—Jefferson Medical College (Philadelphia): 1826.

South Carolina.—Medical School of the State of South Carolina (Charleston): 1825.—University of South Carolina (Columbia): 1868.

Tennessee.—University of Nashville: 1852.—Vanderbilt University (Nashville): 1875.

Texas.—Galveston Medical College: 1866.—Texas Medical College and Hospital (Galveston): 1874.

Vermont.—University of Vermont and State Agricultural College (Burlington): 1823.

Virginia.—University of Virginia (Charlottesville): 1828.—Medical College of Virginia (Richmond): 1839.

HARVARD UNIVERSITY, BOSTON.

THE one hundredth session commences on September 28th. The following are the professors and teachers in the Medical Department:—Dr. Charles W. Eliot (President); Dr. Calvin Ellis (Clinical Medicine); Dr. Oliver W. Holmes (Anatomy); Dr. Henry J. Bigelow (Surgery—*Emeritus*); Dr. Francis Minot (Theory and Practice of Physic); Dr. John P. Reynolds (Obstetrics); Dr. Henry W. Williams (Ophthalmology); Dr. David W. Cheever (Clinical Surgery); Dr. James C. White (Dermatology); Dr. Robert T. Edes (Materia Medica); Dr. Henry P. Bowditch (Physiology); Dr. Charles F. Folsom (Assistant, Mental Diseases); Dr. Frederick I. Knight (Assistant, Laryngology); Dr. Charles B. Porter (Assistant, Surgery); Dr. J. Collins Warren (Assistant, Surgery); Dr. Reginald H. Fitz (Pathological Anatomy); Dr. William L. Richardson (Assistant, Obstetrics); Dr. Thomas Dwight (Instructor in Topographical Anatomy and Histology); Dr. Edward S. Wood (Chemistry); Dr. William H. Baker (Assistant, Gynæcology). Other instructors are:—Dr. William B. Hills (Instructor in Chemistry); Dr. F. W. Draper (Lecturer on Forensic Medicine); Dr. H. P. Quincy (Assistant in Histology); Dr. E. N. Whittier (Instructor in the Theory and Practice of Physic); Dr. F. A. Harris (Demonstrator of Medico-Legal Examinations); Dr. W. P. Bolles (Instructor in Materia Medica); Dr. E. H. Bradford (Assistant in Clinical Surgery); Dr. W. S. Bigelow (Assistant in Surgery); Dr. F. H. Davenport (Assistant in Gynæcology); Dr. G. M. Garland (Assistant in Clinical Medicine); Dr. J. W. Warren (Assistant in Physiology); Dr. M. H. Richardson (Demonstrator of Anatomy); Dr. W. W. Gannett (Assistant in Pathological Anatomy); Dr. C. S. Minot (Lecturer on Embryology); Dr. W. C. Emerson (Assistant in Chemistry); Dr. W. J. Otis (Assistant in Anatomy); Dr. Samuel J. Mixer, (Assistant in Anatomy). The following gentlemen will give special clinical instruction:—Dr. John Homans (Diagnosis and Treatment of Ovarian Tumours); Dr. Francis B. Greenough (Syphilis); Dr. Oliver F. Wadsworth (Ophthalmoscopy); Dr. J. Orne Green and Dr. Clarence J. Blake (Otology); Dr. Amos L. Mason and Dr. Frederick C. Shattuck (in Auscultation); Dr. J. P. Oliver and Dr. T. M.

Rotch (Diseases of Children); Dr. S. G. Webber and Dr. J. J. Putnam (Diseases of the Nervous System); Dr. James R. Chadwick (Gynæcology).

All candidates for admission who hold no degree in arts or science, must pass a written examination on entrance to this School, in English, Latin, Physics, and in any one of the following subjects: French, German, Elements of Algebra or of Plain Geometry, Botany.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. The year is divided into two equal terms.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study, to be as ample and full as heretofore. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent. upon all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course, and have passed a satisfactory examination in the studies of the same.

The order of studies and examinations for the four years' course is as follows: *First Year*.—Anatomy, Physiology, and General Chemistry. *Second Year*.—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery. *Third Year*.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery. *Fourth Year*.—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical and Operative Surgery, Hygiene, Forensic Medicine. Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission. The examinations are held in the following order: End of first year—Anatomy, Physiology, and General Chemistry. End of second year—Topographical Anatomy, Medical Chemistry, Materia Medica, and Pathological Anatomy. End of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Surgery. End of fourth year—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Hygiene, Forensic Medicine.

The order for the three years' course is as follows: *First Year*.—Anatomy, Physiology, and General Chemistry. *Second Year*.—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, and Clinical Surgery. *Third Year*.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Derma-

tology, Syphilis, Otolaryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Hygiene, Forensic Medicine. Students following this course are classified as heretofore, and the instruction in the special branches is of the same character as that which has been given for several years. The examinations of the first two years are common to both groups of students. The final examinations at the close of the third year are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Theory and Practice, Clinical Medicine.

Examinations in all subjects are also held before the opening of the School, beginning September 27.

Every candidate for a degree must be twenty-one years of age; must have studied medicine three or four full years, have spent at least one continuous year at this School, have passed a written examination upon all the prescribed studies of the course taken, and have presented a thesis.

Course for Graduates.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies, in such subjects as may specially interest them, the Faculty has established a course which comprises, in addition to the list of special departments above stated, the following branches: Histology; Physiology; Medical Chemistry; Pathological Anatomy. On payment of the full fee the privilege of attending any of the other exercises of the Medical School, the use of the laboratories and library, and all other rights accorded by the University will be granted. Single branches may also be pursued. Graduates of other Medical Schools who may desire to obtain the degree of M.D. at this University will be admitted to examination to this degree after a year's study in the Graduates' Course. Examination on entrance is not required.

Fees.—The fees are: for Matriculation, 5 dollars; for the year, 200 dollars; for one term alone, 120 dollars; for Graduation, 30 dollars. For Graduates' course the fee for one year is 200 dollars; for one term, 120 dollars; and, for single courses, special fees. Payment is made in advance.

Members of any one department of Harvard University have a right to attend lectures and recitations in any other department without paying additional fees.

UNIVERSITY OF PENNSYLVANIA.

THE Medical Department of this University is the oldest medical school in America, having been established in 1765 by Drs. John Morgan and William Shippen, on the plan of the University of Edinburgh, of which the founders were graduates. The following are the professors of the faculty as at present constituted:—Dr. W. Pepper, Provost of the University and *ex officio* President of the Faculty; Dr. H. H. Smith (Surgery—*Emeritus*); Dr. Joseph Leidy (Anatomy); Dr. Richard A. F. Penrose (Obstetrics and Diseases of Women and Children); Dr. Alfred Stillé (Theory and Practice of Medicine, and Clinical Medicine); Dr. D. Hayes Agnew and Dr. John Rhea Barton (Surgery and Clinical Surgery); Dr. William Pepper (Clinical Medicine); Dr. William Goodell (Clinical Gynecology); Dr. James Tyson (General Pathology and Morbid Anatomy); Dr. Horatio C. Wood (Materia Medica, Pharmacy, and General Therapeutics); Dr. Theodore G. Wormley (Chemistry); Dr. John Ashhurst, jun. (Clinical Surgery); Dr. Harrison Allen (Physiology); also the

following clinical professors of special subjects:—Dr. W. F. Norris (Diseases of the Eye); Dr. G. Strawbridge (Diseases of the Ear); Dr. H. C. Wood, (Nervous Diseases); Dr. L. A. Duhring (Diseases of the Skin).

The curriculum is arranged as follows:—*First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final Examinations in General Chemistry, Materia Medica, and Pharmacy. *Second Year:* Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final examinations in Anatomy, Medical Chemistry, and Physiology. *Third Year:* General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children; Gynecology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otolaryngology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children). Final examinations for degree at the end of the course. General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children. Opportunities for practical work in the physiological laboratory will be afforded to those who desire them. A separate fee is charged.

No beneficiary students are received, nor students at reduced rates, except in the case of the six successful applicants for the scholarships created by the board of trustees. These are open to competitive examination. Candidates must furnish satisfactory evidence that they are without the means to defray the expenses of a medical education. They must also write a brief autobiography, which will serve as a test of their qualifications in orthography and grammar; and pass an examination in a Latin prose translation (first three books of Cæsar), and an examination in elementary physics. This examination is held annually in September.

The Faculty have established a post-graduate course, which embraces various special departments. The post-graduate instruction, for the year 1882-3, will be divided into three terms of two months each; 1. From Oct. 23rd to Dec. 23rd; 2. From Jan. 2nd to March 1st; 3. From April 9th to June 9th. It includes a course of didactic lectures on Dermatology, Ophthalmology and Otolaryngology, extending over the four months occupied by the two winter courses, that is, from Oct. 23rd to March 1st. The following subjects are taught practically and in limited classes at the hospitals and dispensaries to which the instructors are attached:—Clinical Medicine and Physical Diagnosis, by Professor Pepper and Dr. Bruen; Renal Diseases, with Practical Examination of Urine, by Professor Tyson; Nervous Diseases and Electro-Therapeutics, by Professor Wood; Clinical Surgery, by Professor Ashhurst and Dr. Wharton; Ophthalmology, by Professor Norris and Dr. Risley; Dermatology, by Professor Duhring; Otolaryngology, by Professor Strawbridge; Gynecology, by Dr. Baer; Operative Surgery, by Dr. White; Syphilis, by Dr. White; Clinical and Operative Obstetrics, by Dr.

Richardson; Laryngology, by Dr. Seiler; Diseases of Children, by Dr. Starr and Dr. Keating.

The Laboratory Building is a spacious building of four floors: the first being devoted to operative dentistry; the second and third are fitted up as chemical laboratories; while the fourth contains apartments for physiological, histological, and pathological investigation. There are also a pharmaceutical laboratory, and one of experimental therapeutics. The attendance of the students upon the laboratory courses is compulsory. Before commencing dissecting, the student is obliged to attend the osteo-syndesmological laboratory, in order to make himself familiar with the skeleton. The following are the requirements for graduation.

Students who have attended one course in a regular medical school (homœopathic and eclectic schools are not recognised) will be admitted as students of the second course in the University, after having satisfactorily passed an examination in general chemistry and materia medica and pharmacy. Students who have attended two courses in a regular medical school will be admitted as students of the third course, after having satisfactorily passed an examination in general and medical chemistry, materia medica and pharmacy, anatomy, and physiology. Graduates of other regular medical schools in good standing will be admitted as students of the third course without an examination. Graduates of colleges of pharmacy and dental colleges in good standing are admitted to the second course without an examination.

The candidate for the degree of doctor of medicine must have attained the age of twenty-one years, and be of good moral character. He must have studied medicine for three years, and have attended at least his last course of instruction in this school; have prepared a satisfactory thesis, and have passed the required examinations. Candidates who have not been successful upon a first examination will be permitted to have a second before the June commencement. The commencement for conferring the degree of doctor of medicine is held on the 15th day of March, unless that day should fall on a Saturday or Sunday, when it is held on the preceding Friday. The degree will not be conferred upon a candidate who absents himself from the public commencement, except by special permission of the medical faculty.

The entire college expenses for the three years' course is 435 dollars, including matriculation and graduating fees.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

THE fifty-eighth Session of this College will begin on October 2nd, and continue till the end of March 1883. The lectures will be delivered by the following professors: Dr. Samuel D. Gross (Institutes and Practice of Surgery);—*Emeritus*; Dr. Ellerslie Wallace (Obstetrics and Diseases of Women and Children); Dr. Roberts Bartholow (Materia Medica and General Therapeutics); Dr. Henry C. Chapman (Institutes of Medicine and Medical Jurisprudence); Dr. J. M. Da Costa (Practice of Medicine); Dr. W. H. Pancoast (General Descriptive, and Surgical Anatomy); Dr. Robert E. Rogers (Medical Chemistry and Toxicology); Dr. S. W. Gross (Principles of Surgery and Clinical Surgery); Dr. J. H. Brinton (Practice of Surgery and Clinical Surgery); Dr. W. Thompson (Ophthalmology).

A spring course of Supplementary Lectures is given, beginning early in April and ending early in June. There is no additional charge for this course to matriculates of the College, except a registration fee of 5 dollars; non-matriculates pay 40 dollars, 35 of which is, however, credited on the amount of fees paid for the ensuing Winter Course.

The recent enlargement of the College has enabled the Faculty to perfect the system of Practical Laboratory Instruction, in all the Departments. Rooms are assigned in which each Professor, with his Demonstrators, instructs the Class, in Sections, in direct observation and hand-work in the Chemical, Pharmaceutical, Physiological, and Pathological Laboratories. Operative and Minor Surgery, and investigation of Gynæcological and Obstetric conditions on the Cadaver, are taught, as also Diagnosis of Disease on the living subject. This course of Instruction is free of charge, but obligatory upon candidates for the Degree, except those who are Graduates of other Colleges of ten years' standing.

Clinical Instruction is given throughout the year at the Hospital of Jefferson College, which accommodates 100 patients.

A candidate for the degree of M.D. must be of good moral character, and at least 21 years of age. He must have studied medicine for not less than three years, and have attended at least two full winter sessions of lectures, one of which must have been in this College. At least one course of Practical Anatomy and one of Clinical Instruction must have been attended; and he must present a thesis, of his own composition and in his own handwriting, on some medical subject.

No honorary degrees in medicine are granted by this College.

The *Fees* are: for a full Course, 140 dollars; Matriculation Fee (paid once only), 5 dollars; Practical Anatomy, 10 dollars; Graduation Fee, 30 dollars; for a full course of Lectures to those who have attended two full courses at other recognised Colleges, the Matriculation Fee and 70 dollars; to Graduates of other Colleges, of less than ten years, the Matriculation Fee and 50 dollars; to Graduates of ten years and upwards, the Matriculation Fee only.

COLLEGE OF PHYSICIANS AND SUR- GEONS OF NEW YORK.

THIS is otherwise known as the Medical Faculty of Columbia College. The instruction is given by the following professors, etc.: Dr. Alonzo Clark (Pathology and Practical Medicine); Dr. Willard Parker (Principles and Practice of Surgery)—*Emeritus*; Dr. J. C. Dalton (Physiology and Hygiene); Dr. T. M. Markoe (Principles of Surgery); Dr. T. Gaillard Thomas (Clinical Gynæcology); Dr. J. T. Metcalfe (Clinical Medicine)—*Emeritus*; Dr. H. B. Sands (Practice of Surgery); Dr. J. W. McLane (Obstetrics and the Diseases of Children); Mr. T. T. Sabine (Anatomy); Dr. C. F. Chandler (Chemistry and Medical Jurisprudence); Dr. E. Curtis (Materia Medica and Therapeutics); Dr. F. Delafield (Adjunct, Pathology and Practical Medicine); Dr. J. G. Curtis (Adjunct, Physiology and Hygiene); Dr. Wm. Detmold (Military and Clinical Surgery)—*Emeritus*; Dr. W. H. Draper (Clinical Medicine); Dr. Cornelius R. Agnew (Diseases of the Eye and Ear); Dr. Abraham Jacobi (Clinical, Diseases of Children); Dr. Fessenden N. Otis (Clinical, Venereal Diseases); Dr. Edward C. Seguin (Clinical, Diseases of the Mind and Nervous System); Dr. G. M. Lefferts

(Clinical, Laryngoscopy and Diseases of the Throat); Dr. G. H. Fox (Clinical, Diseases of the Skin); Dr. Bull (Demonstrator of Anatomy); Dr. Prudden (Director of the Pathological Laboratory).

The Collegiate Year consists of a regular Winter Session, attendance upon which is required for the graduation. The Session for 1882-83 begins October 2nd, and continues till May. Tuition is by the following methods:

1. *Didactic Lectures*.—During the Session from two to six lectures are given daily by the Faculty. Attendance is obligatory.

2. *Clinical Teaching*.—Ten clinics, covering all departments of medicine and surgery, are held weekly throughout the entire year in the College Building. In addition, the Faculty give daily clinics at the larger City Hospitals and Dispensaries (such as the Bellevue Charity, New York, and Roosevelt Hospitals, the New York Eye and Ear Infirmary, the Women's Hospital, etc.) Attendance is optional.

3. *Recitations* are held daily. Attendance is optional.

Personal Instruction.—Personal instruction is given in Practical Anatomy, Experimental Physiology, Operative Surgery, Minor Surgery, Physical Diagnosis, Ophthalmology, Otology, Laryngoscopy, Normal and Pathological Histology, and the Examination of the urine. Attendance is optional, except upon Practical Anatomy.

Candidates for the Degree of Doctor of Medicine must have attended two full courses of lectures on Anatomy, Physiology, Chemistry, *Materia Medica* and Therapeutics, Obstetrics, Surgery, Pathology, and Practical Medicine; the second course must have been given in this College. Students are permitted—and are recommended—to complete the two full courses by attendance during three or more sessions, taking only certain branches in each session. Candidates must have studied Practical Anatomy during one winter session; have been engaged during three years in the study of medicine under a regular physician or surgeon; have attained the age of 21 years; and be of good moral character. Each candidate must present a thesis on some medical subject, and pass an examination in the seven branches of medical science above mentioned.

Students who have attended two courses of lectures (one being at this College) on Anatomy, Physiology, and Chemistry, may be examined on these subjects at the end of their second course; and the examination, if satisfactory, is accounted final.

Students and graduates of other schools are admitted under special regulations.

The fees are: Yearly matriculation, 5 dollars; Course of Lectures each Session, 140 dollars, or 20 dollars for each course; Practical Anatomy, 10 dollars, and graduation fee, 30 dollars.

UNIVERSITY OF THE CITY OF NEW YORK.

THE Professors in the Faculty of Medicine are: Dr. Alfred C. Post (Clinical Surgery)—*Emeritus*; Dr. Charles I. Pardee (Diseases of the Ear); Dr. John C. Draper (Chemistry); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. W. Darling (Anatomy); Dr. W. H. Thomson (*Materia Medica*, Therapeutics, and Diseases of the Nervous System); Dr. J. W. S. Arnold (Physiology and Histology); Dr. J. Williston Wright (Surgery); Dr. Fanueil D. Weiss (Practical and Surgical Anatomy); Dr. W. H. Polk (Obstetrics and Diseases of Women and

Children; Dr. L. A. Stimson (Pathological Anatomy); Dr. R. Witthaus (Physiological Chemistry); Dr. Stephen Smith (Clinical Surgery); Dr. A. E. Macdonald (Medical Jurisprudence and Diseases of the Mind); Dr. H. Knapp (Ophthalmology); Dr. A. L. Ranney (Adjunct Professor of Anatomy).

The Collegiate Year is divided into three Sessions: a Preliminary Session, a Regular Winter Session, and a Spring Session.

The Preliminary Session will begin on Wednesday, September 20th, and end October 4th. It will be conducted on the same plan as the Regular Winter Session.

The Regular Winter Session will begin October 4th, 1882, and end about the middle of March 1883. The Plan of Instruction consists of Didactic and Clinical Lectures, recitations and laboratory work in all subjects in which it is practicable. To put the laboratories on a proper footing a new building has been erected at an expense of 30,000 dollars. It will contain laboratories fitted for instruction in Chemistry, Histology, Pathology, *Materia Medica*, Operative Surgery, and Gynecology.

Two to five Didactic Lectures, and two or more Clinical Lectures, will be given each day by members of the Faculty. In addition to the ordinary clinics, special clinical instruction, without additional expense, will be given to the candidates for graduation during the latter part of the Regular Session. For this purpose the candidates will be divided into sections of twenty-five members each. All who desire to avail themselves of this valuable privilege must give in their names, and pay their examination fee of 30 dollars to the Dean, during the first week in November. At these special clinics students will have excellent opportunities to make and verify diagnoses, and watch the effects of treatment. They will be held in the Wards of the Hospitals and at the Public and College Dispensaries.

Evening Recitations are conducted by the Professors of Chemistry, Practice, Anatomy, *Materia Medica*, Physiology, Surgery, and Obstetrics, upon the subjects of their lectures. Students are thus enabled to make up for lost lectures and prepare themselves properly for their final examinations without additional expense.

The Spring Session will begin about the middle of March and end the last week in May. The daily Clinics and Special Practical Courses will be the same as in the Winter Session, and there will be Lectures on Special Subjects by the Members of the Faculty. It is supplementary to the Regular Winter Session. Nine months of continued instruction are thus secured to all students of the University who desire a thorough course.

Fees.—These are: for Course of Lectures, 140 dollars; Matriculation, 5 dollars; Demonstrator's Fee (including material for dissection), 10 dollars; final Examination Fee, 30 dollars.

BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

THE teaching staff of the College consists of the following professors: Dr. Isaac E. Taylor (Obstetrics and Diseases of Women)—*Emeritus*; Dr. Fordyce Barker (Clinical Midwifery and Diseases of Women); Dr. B. W. McCready (*Materia Medica* and Therapeutics and Clinical Medicine)—*Emeritus*; Dr. Austin Flint (Principles and Practice of Medicine, and Clinical Medicine); Dr. W. H. Van Buren (Principles and Practice of Surgery and Clinical Sur-

gery); Dr. Lewis A. Sayre (Orthopædic Surgery and Clinical Surgery); Dr. Alexander B. Mott (Clinical and Operative Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. A. A. Smith (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint, jun. (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (General, Descriptive, and Surgical Anatomy); Dr. R. Ogden Doremus (Chemistry and Toxicology); Dr. Edward G. Janeway, Diseases of the Nervous System and Clinical Medicine, and Associate Professor of Medicine); Dr. Henry D. Noyes (Ophthalmology and Otolaryngology); Dr. John P. Gray (Psychological Medicine and Medical Jurisprudence); Dr. J. W. Howe (Clinical Surgery); Dr. Edward L. Keyes, Cutaneous and Genito-Urinary Diseases); Dr. J. L. Smith (Diseases of Children); Dr. F. S. Dennis (Adjunct, of Principles and Practice of Surgery); Dr. W. H. Welsh (Pathological Anatomy and General Pathology); Dr. C. A. Doremus (Adjunct to Chair of Chemistry and Toxicology); also the following lecturers: Dr. L. M. Yale (Adjunct, upon Orthopædic Surgery); Dr. Beverley Robinson (Clinical Medicine); Dr. F. H. Bosworth (Diseases of the Throat); Dr. F. A. Castle (Pharmacology); Dr. W. H. Welch (Pathological Histology); Dr. T. H. Burchard (Surgical Emergencies); Dr. C. S. Bull (Ophthalmology and Otolaryngology).

The Collegiate Year in this Institution embraces the Regular Winter Session, and a Spring Session. The Regular Session begins on Wednesday, September 20, 1882, and ends about the middle of March 1883. During this Session, in addition to four didactic lectures on every week day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The Spring Session consists chiefly of recitations from text-books. This Session begins about the middle of March, and continues until the middle of June. During this Session, daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

Fees.—For the Regular Session: Tickets to all the Lectures, Clinical and Didactic, 140 dollars; for Students who have attended two full courses at other Medical Colleges; and for Graduates of less than three years' standing of other Medical Colleges, 70 dollars; Matriculation fee, 5 dollars; Dissection fee (including material for dissection), 10 dollars; Graduation fee, 30 dollars; no fees for Lectures are required of Graduates of three years' standing, or of third-course Students who have attended their second course at the Bellevue Hospital Medical College. For the Spring Session: Matriculation (ticket valid for the following winter), 5 dollars; Recitations, Clinics, and Lectures, 40 dollars; Dissection (ticket valid for the following winter), 10 dollars.

The *Matriculation Examination* consists of English composition; Grammar, an examination upon the above-mentioned composition; Arithmetic, including vulgar and decimal fractions; Algebra, including simple equations; Geometry, first two books of Euclid. This examination will be waived for those who have received the degree of A.B., those who have passed the freshman examination for entrance into any incorporated literary college, those who present certificates of proficiency in the subjects

of the matriculation examination from the principal or teachers of any reputable high school, and those who have passed a matriculation examination at any recognised medical college or at any scientific school or academy in which an examination is required for admission.

JOHNS HOPKINS UNIVERSITY, BALTIMORE.

The Johns Hopkins University provides a special collegiate course for those who intend afterwards to study medicine. This course extends throughout three years, and the A.B. degree is conferred on matriculated students who complete it. The main object held in view is to utilise for intending medical students the opportunities for practical study in physics, chemistry, and biology, found in an endowed institution with well-equipped laboratories, and often wanting in medical schools; it is also considered an object to lessen the work at a medical school by giving the student a good knowledge of the sciences which lie at the basis of the medical art before he commences professional study. Physics, chemistry, and biology are therefore the main subjects included in the course; some knowledge of French and German is also demanded; and there are, in addition, several subjects between which an option is allowed. These are Latin, Greek, mathematics, English literature, history, logic, and psychology. Each student must take up at least two of these optional subjects, the amount of knowledge required in each being such as would be obtained by a year's honest work.

The scientific subjects are taken up in the following order.

I. *Physics*.—There will be three recitations, two lectures, and one exercise in the physical laboratory weekly through a year. Elementary mechanics will be studied during the first portion of the year; then will follow the study of the physical properties of matter, theory of undulations, acoustics, heat, magnetism, electricity, and light.

II. *Chemistry*.—The course of lectures and recitations on general chemistry is in progress through the year. Students of this course are expected to attend all these exercises during the first year, and during the last half of the first year and the first half of the second year to work daily in the chemical laboratory.

III. *Biology*.—The study of biology will begin in the second year, after the student has made considerable progress in the study of physics and chemistry, and will continue through the third year. Those who have acquired elsewhere sufficient knowledge of the above subjects to satisfy the examiners may be at once admitted to work in the biological laboratory.

The course of study is as follows. 1. *General Biology*.—Lectures, recitations, or examinations four times weekly throughout one year, with daily laboratory instruction. In this course, beginners are taught how to use the microscope and to dissect. 2. *Human and Comparative Osteology*.—About sixty lectures or recitations. 3. *Human Anatomy*.—This course extends from the commencement of the closing academic year to the end of March, and consists chiefly of demonstrations and practical study in the dissecting-room. 4. *Animal Physiology and Histology*.—Three lectures or examinations weekly throughout the academic year. The microscopic structure of the tissues and organs is studied,

except so much as may have already been gone through in the course of general biology. Students are required to perform for themselves the simpler physiological experiments. 5. From time to time short advanced courses of lectures on special physiological topics are delivered.

Instruction is also provided in mathematics, ancient and modern languages, history, psychology, English philology and literature, comparative anatomy, botany.

Graduates from approved institutions, having already obtained a liberal education, concentrate their attention on the scientific courses, and so complete the curriculum preliminary to medical studies in less than three years. On the other hand, a student may spend a longer time in these preparatory studies, or take up additional ones. Medical men or others properly fitted to profit by such opportunities are received for advanced study or investigation in chemistry, histology, or physiology, as well as other subjects.

CANADA.

THE following are the Medical Examining Bodies and Schools in the several provinces constituting the Dominion of Canada.

NOVA SCOTIA.—University of Halifax Faculty of Medicine; Halifax Medical College.

ONTARIO.—College of Physicians and Surgeons of Ontario; Medical Faculty of the University of Victoria College, Coburg; Medical Faculty of Queen's College, Kingston; Royal College of Physicians and Surgeons, Kingston; Medical Faculty of the University of Ottawa; Toronto University Faculty of Medicine; Trinity College Faculty of Medicine, Toronto; Toronto School of Medicine; Trinity Medical College.

QUEBEC.—College of Physicians and Surgeons of Québec; Bishop's College University Faculty of Medicine, Montreal; Laval University, Montreal and Québec; McGill University Faculty of Medicine.

TORONTO UNIVERSITY FACULTY OF MEDICINE.

THE Degree of Bachelor of Medicine may be obtained, either (1) by taking a Pass Course, or (2) by taking an Honour Course.

Candidates, to enter this faculty, must pass the Matriculation Examination unless (1) they possess a Degree in Arts, not being an Honorary Degree, from any Dominion or British University, or (2) they have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University. Before presenting themselves for the Matriculation Examination, candidates must produce satisfactory certificates of good conduct, and of having completed the sixteenth year of their age. The Matriculation Examination (both Pass and Honours) commences in the latter part of June, and Supplemental Examinations (Pass alone) are held in the latter part of September. Candidates on giving notice of intention to present themselves at the Matriculation Examination must signify whether they propose taking the Pass or the Honour Examination. Scholarships are only awarded in connection with the latter. The following groups of subjects must be passed by every Matriculant: 1. Three out of four

languages, Latin, Greek, French, and German, one of which must be Latin; 2. Mathematics, including Arithmetic, Algebra to the end of Quadratics, and the first three books of Euclid; 3. English Grammar and Composition, with the Outlines of History and of modern Geography, and an exercise in Writing to Dictation. Extra Honour papers are set in all the above-mentioned subjects, and special attention is paid to translation from English into other languages. A paper on Chemistry is set for such honour students as may enter for the same. Those candidates are placed in the first class of honours who obtain two-thirds or more of the aggregate number of marks; those who obtain one-half of the aggregate number in the second class. Two Matriculation Scholarships are awarded to the two highest candidates, provided that they have obtained at least sixty per cent. of the aggregate number of marks, exclusive of those allotted Chemistry. Undergraduates must attend lectures and receive practical instruction, during four years, at a recognised School of Medicine. Each Undergraduate, at the end of each of the four years, must present himself at the Annual Examination. These examinations are styled the first, second, third, and fourth Professional Examinations, and are to be passed by all candidates for the Degree. If a candidate be prevented by sickness, or other unavoidable cause, from attending at one of the Professional Examinations, he may take that examination together with the next following. If a candidate be rejected in one subject only, having shown fair proficiency in the others, he may take that subject along with the work of the next Professional Examination. If a candidate for the First Professional Examination fail to pass in two subjects, the Board of Examiners may recommend that the subjects passed be allowed, and that he shall take the others with the Second Professional Examination. Graduates in Arts of this University, with honours in department of Natural Sciences, are exempted from the First Professional Examination, and from the fee for the same. They must, however, take Anatomy along with the Second Professional Examination. No candidate can pass a Professional Examination who has not obtained at least one-half of the marks required; nor is a candidate considered as having passed any subject who has not obtained at least one-third of the marks allotted to it. Every undergraduate who proposes to present himself at a Professional Examination must send in to the Registrar a statement (according to a printed form furnished) of the course he is taking, whether Pass or Honour, of the lectures attended, and of the practical instruction received, with the names of the Teachers, and such other particulars as the printed form may indicate, together with the original certificates referred to in the statement.

The following are the certificates required for the different examinations, and the subjects of examination.

First Professional Examination.—Certificates are required: 1. Of Matriculation; 2. Of having attended a course of lectures on each of the following subjects: Anatomy, at least 100 lectures; Inorganic Chemistry, at least 60 lectures; Natural Philosophy, at least 20 lectures; *Botany, at least 40 lectures; *Zoology at least 40 lectures. Of the above lectures marked *, at least one-third must be of the nature of practical lessons, involving laboratory practice; 3. Of practical instruction in Anatomy during six months. The subjects of examination are: 1. Anatomy

of the Bones, Muscles, and Ligaments, and of the Viscera of the Abdomen and Thorax; 2. Elements of Inorganic Chemistry; 3. Elements of Natural Philosophy, Electricity, Heat, and Light; 4. Elements of Botany, including the characters and properties of the following Natural Orders; Ranunculaceæ, Papaveraceæ, Cruciferae, Caryophyllaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Saxifragaceæ, Onagraceæ, Umbelliferae, Rubiaceæ, Compositæ, Ericaceæ, Primulaceæ, Scrophulariaceæ, Labiatae, Solanaceæ, Polygonaceæ, Euphorbiaceæ, Urticaceæ, Amnatae, Orchidaceæ, Liliaceæ, Palmæ, Cyperaceæ, Gramineæ. An acquaintance with the noxious and medicinal plants of the Canadian Flora is expected: 5. Elements of Zoology; and, for candidates for honours, Comparative Anatomy of Vertebrata, and Practical Examination in Natural Philosophy.

Second Professional Examination.—Candidates must produce certificates: 1. Of having attended lectures on Anatomy (second course of 100 lectures); Physiology, Materia Medica and Therapeutics, each at least 100 lectures; Organic Chemistry, at least 40 lectures; 2. Of Practical Instruction in Anatomy (a second course of six months; Histology; and Physiological Chemistry, each during at least three months; 3. Of having dissected the human body once; 4. Of being skilled in Compounding and Dispensing Drugs. (This certificate may be from a registered practitioner, the apothecary of a public hospital, or of a public dispensary, or from a member of the Pharmaceutical Societies of Ontario or Quebec.) The subjects of examination are: 1. Elements of Organic Chemistry; 2. Anatomy; 3. Physiology; 4. Materia Medica and Therapeutics; and (for honours) Physiology of Muscle, Nerve, Circulation, etc.

Third Professional Examination.—The candidates must produce evidence: 1. Of having attended lectures on Practice of Medicine, Surgery, Obstetrics, etc.; Clinical Surgery and Medicine, during courses of 100 lectures each; General Pathology, at least 50 lectures; 2. Of having dissected the human body a second time; 3. Of Practical Instruction in Pathological Histology during at least three months. The subjects of this examination are: 1. Practice of Medicine; 2. Surgery and Surgical Anatomy; 3. General Pathology, including Morbid Anatomy and the mode of conducting Necropsies; 4. Obstetrics and Diseases of Women and Children; 5. Clinical Medicine and Surgery.

Fourth Professional Examination.—Certificates are required: 1. Of having attended lectures on:—Clinical Medicine and Surgery, a further course of 100 lectures; Forensic Medicine, 50 lectures; Hygiene, 25 lectures; Medical Psychology, 12 lectures; 2. Of Practical Instruction in Chemistry in its application to Hygiene and Forensic Medicine; 3. Of having attended at least six clinics in a Public Lunatic Asylum; 4. Of having conducted at least six Labours; 5. Of proficiency in Vaccination (certificate received from any registered Practitioner); 6. Of attendance in the wards of a Public Hospital accommodating not less than 100 beds during eighteen months; 7. Of attendance for six months on the out practice of a Hospital, Dispensary, or registered Practitioner; 8. Of having attended twelve Necropsies. The subjects of examination are: 1. Practice of Medicine; 2. Surgery; 3. Forensic Medicine; 4. Hygiene; 5. Medical Psychology; 6. Clinical Medicine and Surgery; 7. Practical Chemistry in its application to Forensic Medicine and Hygiene.

In all the Professional Examinations special importance is attached to the practical part.

Candidates for Honours are entitled to First Class Honours in any of the Professional Examinations if they obtain 75 per cent. of the aggregate marks; those who obtain 66 per cent. will be entitled to Second Class Honours. Extra papers on all the Pass Subjects will be set for Honour candidates, as well as papers on certain subjects, as indicated above. Candidates proceeding to the Degree of M.B. by taking the Honour Course are grouped in two classes. Those receive the Degree with First Class Honours who have been placed in the Honour List in all of the four Professional Examinations, and have obtained First Class Honours in at least three out of the four. Those receive their Degree with Second Class Honours who have been placed in the Honour List in three out of the four Professional Examinations, and have obtained First Class Honours in at least one examination. Candidates for the Degree of M.B. who are also Graduates in Arts of the University with Honours in the Department of Natural Science, are considered as having passed their first Professional Examination with First Class Honours.

Degree of M.D.—Candidates for the Degree of M.D. must be of one year's standing from admission to the Degree of M.B., and have composed an approved thesis upon some medical subject.

Fees.—The fees are: Matriculation, 5 dollars; Registration of exemption from this examination for Graduates in Arts from other Universities, 5 dollars; for Matriculants from other Faculties in the University, 3 dollars; for Graduates in Arts of this University, 2 dollars. No fee is exacted from Graduates in Arts of this University who have taken honours in Natural Science. For each Professional Examination, 2 dollars; a rejected candidate may present himself at the same examination in the following year on payment of 1 dollar. Degree of M.B., 6 dollars; Degree of M.D., 8 dollars; admission *ad eundem gradum*, 10 dollars.

TRINITY COLLEGE UNIVERSITY FACULTY OF MEDICINE.

THE following are the requisites for admission to the Degree of Bachelor of Medicine in this University. The candidate must have passed a Matriculation Examination in the following subjects, or one equivalent thereto, in this or in some other recognised institution. The subjects comprised are: English Language (including Grammar and Composition); Arithmetic; Algebra (including Simple Equations); Geometry (first two Books of Euclid); Latin (Translation and Grammar); and one of the following optional subjects: Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. A Graduate or Matriculant in Arts, in any recognised University in Her Majesty's Dominions, is not required to pass the Matriculation Examination. He must produce a satisfactory certificate of good conduct, must be 21 years of age, and must have pursued Medical studies for at least four years, and have regularly attended lectures extending over four winter sessions, or have studied one year with a medical practitioner, and have subsequently attended lectures during three winter sessions. He must also have attended for at least eighteen months the practice of some General Hospital, and have attended, during two sessions, Clinical Lectures on Medicine and Surgery; and, for at least six months,

the practice of a Lying-in-Hospital; or he must have otherwise enjoyed equivalent obstetrical advantages, with attendance upon at least six cases of Labour. He must have passed in this University an examination in all the above subjects. The course of study may have been pursued either wholly in Trinity Medical School, or partly in some other recognised Medical School.

The examinations are Primary and Final. The Primary Examination embraces Descriptive Anatomy, Physiology and Microscopical Anatomy, General Chemistry and Chemical Physics, Practical Chemistry, Materia Medica and Therapeutics, Botany. It may be passed at the close of the second year's lectures.

The Final Examination embraces Medical and Surgical Anatomy. Theory and Practice of Medicine, including Medical Pathology, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence and Toxicology, and Sanitary Science. It takes place at the close of the last Winter Session.

Should the candidate desire it, he may undergo his entire examination in all the branches at the end of his last year's study. The examinations are held annually in the spring.

Degree of M.D.—Candidates for this Degree must be Bachelors of Medicine of at least six months' standing. They are required to send in, at least one month before Convocation, a Thesis on some Medical Subject, which Thesis must be approved by the Board of Examiners.

Fees.—These are: Primary Examination for the Degree of M.B., 10 dollars; Final ditto, 14 dollars. Full Fee, including all College Examinations, 24 dollars. There is no additional fee for the degree of M.D.

TRINITY MEDICAL COLLEGE.

THIS College is in affiliation with the University of Trinity College; also with the Universities of Toronto and Halifax; and is recognised by the Royal Colleges of Physicians and Surgeons of Great Britain. The winter Session of 1882-83 will commence on Monday, October 2nd, 1882. Lectures will be delivered by the following professors: Dr. Walter B. Geikie (Practice of Medicine and Clinical Medicine); Dr. J. Fulton (Surgery and Clinical Surgery); Dr. J. Algernon Temple (Obstetrics and Diseases of Women and Children); Dr. J. E. Kennedy (Materia Medica and Therapeutics); Dr. H. Robertson (Anatomy, Descriptive and Surgical); Mr. Thomas Kirkham (General Chemistry and Botany); Dr. C. W. Covernton (Sanitary Science); Dr. Fred. Le M. Grasset (Medical Jurisprudence, Lecturer on Surgical Appliances); Dr. W. T. Stuart (Practical Chemistry and Toxicology); Dr. Charles Sheard, (Physiology of Histology); Dr. J. Fraser is Demonstrator of Anatomy; and Dr. G. S. Ryerson lectures on the Eye, Ear, and Throat.

Matriculation.—Students are advised before commencing their medical studies, to pass the Matriculation Examination of the Medical Council of Ontario or Quebec, either of which will be accepted by the University of Trinity College. Students from the Maritime Provinces, Ontario, or the United States, who do not desire to pass the Council Examination, will be admitted to attendance on Lectures, but must present themselves for the Matriculation Examination of Trinity University, on the second Saturday of October or March, or the Matriculation

in Toronto University at the usual time. The matriculation of the Universities may be passed at any time before graduation.

The Toronto General Hospital has a large number of patients in the wards, who are visited daily by the medical officers in attendance. The attendance of out-door patients daily is also very large, and thus abundant opportunities are enjoyed by students, for acquiring a familiar knowledge of Practical Medicine and Surgery. The Burnside Lying-in Hospital, amalgamated with the Toronto General Hospital, has recently had its staff largely increased, and will afford special and valuable facilities for the study of Practical Midwifery. The large new building, close to the Hospital and School, will be very convenient for students attending its practice. The Mercer Eye and Ear Infirmary is also amalgamated with the Toronto General Hospital, and affords special facilities for students in this department. The Toronto Dispensary, established several years ago, is open to students free of charge.

Daily clinical instruction will be given by members of the Hospital Staff, on all interesting cases, Medical and Surgical. Arrangements have been recently made for the delivery of daily clinics, in the theatre of the Hospital, by the respective professors in medicine and surgery of both schools, in addition to the usual clinics.

Fees.—The Fee for Anatomy, Surgery, Practice of Medicine, Obstetrics, Materia Medica, Physiology, and General Chemistry, 12 dollars each. Practical Anatomy, Practical Chemistry, Medical Jurisprudence, and Microscopy, 8 dollars each; Clinical Medicine and Clinical Surgery, 6 dollars each; Botany and Sanitary Science, 5 dollars each; Registration Fee (payable once only), 5 dollars. Students are free in all the regular Branches after having attended the School during two full courses.

MCGILL UNIVERSITY FACULTY OF MEDICINE, MONTREAL,

THE Matriculation Examination comprises the following subjects: English Language (including Grammar and Composition); Arithmetic (including Vulgar and Decimal Fractions); Algebra (including Simple Equations); Geometry (first two books of Euclid); Latin (Translation and Grammar); and one of the following optional subjects: Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. Graduates in Arts of recognised Universities are not required to submit to the Matriculation Examination; and a certificate of having passed this examination before the College of Physicians and Surgeons of Ontario or of Quebec is accepted.

Candidates for the degree of Doctor of Medicine and Master of Surgery must be 21 years of age, must have studied medicine four years, one Session being at this School, and must pass the necessary examinations. Graduates in Arts of recognised Universities, and students who produce evidence of having studied a year with a physician subsequent to passing the Matriculation Examination, can qualify for examination after attendance on three Sessions.

Candidates for the Final Examination must furnish testimonials of attendance on the following courses: Anatomy, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Practical Anatomy, Clinical Medicine, Clinical Surgery—each

two six-months' courses; Medical Jurisprudence—one course of six months or two courses of three months; Practical Chemistry, Botany or Zoology, Hygiene—each one three-months' course duration; not less than twenty-five Demonstrations upon Microscopic Anatomy, Physiology, and Pathology. Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted. The Candidate must have attended during eighteen months the practice of the Montreal General Hospital, or that of some other approved Hospital, and have compounded medicines for six months. He must also have attended for at least six months the practice of the University or other approved Lying-in Hospital, and have attended at least six Accouchements.

The examinations at the close of each session are arranged as follows: *First Year*.—Elementary Anatomy and Physiology; Chemistry (Chemical Physics and Chemical Philosophy); *Materia Medica*; Practical Anatomy; Botany. *Second Year*.—Primary Pass Examination—Anatomy; Practical Anatomy; Physiology; Chemistry; Practical Chemistry; *Materia Medica*. *Third Year*.—Sessional Examination—Medical Jurisprudence, with Toxicology; Hygiene;* Medicine; Surgery; Midwifery. *Fourth Year*.—Final Pass Examination—Medicine, Surgery, Midwifery, Clinical Medicine, Clinical Surgery, Medical Anatomy, Surgical Anatomy.

The Sessional Examinations at the close of the first and third years are compulsory. At the Primary Examination at the end of the second year, the student may leave two branches for the third year; in any case, Chemistry and one other must be taken at the end of the second year.

The Collegiate Courses of the School are a Winter Session, extending from the 1st of October to the end of March, and a Summer Session, from the end of the first week in April to the end of the first week in July. The fiftieth session will commence on October 1st. Lectures will be given by the following professors:—Dr. William E. Scott (Anatomy); Dr. William Wright (*Materia Medica* and Therapeutics); Dr. Robert P. Howard (Theory and Practice of Medicine); Dr. Duncan C. McCallum (Midwifery and the Diseases of Women and Children); Dr. J. W. Dawson, F.R.S. (Botany and Zoology); Dr. G. E. Fenwick (Surgery); Dr. G. P. Girdwood (Chemistry); Dr. George Ross (Clinical Medicine); Dr. William Osler (Institutes of Medicine); Dr. Thomas G. Roddick (Clinical Surgery); Dr. William Gardner (Medical Jurisprudence and Hygiene); and also by Dr. Frank Buller, Lecturer on Ophthalmology; Dr. Francis J. Shepherd, Demonstrator of Anatomy; Dr. Arthur A. Browne, Instructor in Obstetrics; Dr. George W. Major, Instructor in Laryngology; and Dr. Alex. D. Blackader, Instructor in Diseases of Children.

Students from Ontario and Quebec are advised to pass the Matriculation Examination of the Medical Councils of their respective Provinces before entering upon their studies. Students from the United States and Maritime Provinces must present themselves for the Matriculation Examination of the University, on the first Friday of October, or the last Friday of March.

The Montreal General Hospital has an average number of 150 patients in the wards, the majority of the cases being acute. The shipping and large manufactories contribute many examples of acci-

dents and surgical cases. In the out-door department there is a daily attendance of between 75 and 100 patients, which affords excellent instruction in minor surgery, routine medical practice, venereal diseases, and the diseases of children. Clinical clerkships and dresserships can be obtained on application to the members of the Hospital staff. The University Dispensary was established four years ago for the purpose of affording to senior students practical instruction in diseases of women. Two other special departments have been added, viz.: diseases of children and diseases of the skin.

The clinical teaching is conducted in the wards and theatre of the General Hospital, daily, throughout the Session. Ample opportunities are afforded to the student to investigate the cases.

The fees, arranged according to years, are as follows:—First year, 76 dollars; second year, 89 dollars; third year, 74 dollars; fourth year, 64 dollars; Hospital Ticket (six months), 8 dollars; Lying-in Hospital (six months), 8 dollars; Graduation, 20 dollars. All fees are payable strictly in advance.

COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

EVERY medical student of the province of Quebec, before beginning his professional studies, must pass a satisfactory examination upon the following subjects: English and French, Latin, Geography, History, Arithmetic, Algebra, Geometry, and Belles-Lettres, and upon any one of the following subjects: Greek, Natural and Moral Philosophy. He must also present a certificate of a good moral character.

The examination is oral and written; and the oral part of the examination is conducted jointly by two examiners, one speaking French and the other English.

The Board may recognise an equivalent preliminary examination before any authorised College or Licensing Board in Her Majesty's Dominion, provided that the same privilege is accorded to the students of this province.

Every medical student must pursue his professional studies during not less than four years from the time of his having passed the Preliminary Examination. Of the four years, three six months' sessions at least must be passed in attendance upon lectures at an University, College, or incorporated School of Medicine recognised by this Board, the first whereof shall be so passed the year immediately succeeding the Preliminary Examination. Every student must pursue the following curriculum of study: General or Descriptive Anatomy, Practical Anatomy, Surgery, Practice of Medicine, Midwifery, Chemistry, *Materia Medica* and General Therapeutics, the Institutes of Medicine or Physiology, and General Pathology, Clinical Medicine, Clinical Surgery, two six months' courses of each; Medical Jurisprudence, a course of six months, or two courses of three months; Botany and Hygiene, a three months' course of each; and a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology. He must attend the general practice of an Hospital containing not less than fifty beds, under the charge of not less than two physicians or surgeons, for not less than eighteen months, or for three periods of not less than six months each. He must attend six cases of labour, and compound medicine for six months. Each six months' course must consist of 120 lectures

* May be taken at the end of the second year.

except those of Clinical Medicine, of Clinical Surgery, and of Medical Jurisprudence.

The total duration of the examination is one hour and forty-five minutes.

Before examination the candidate must deposit the required fee, and produce satisfactory evidence that he has attained the full age of twenty-one years, and that he has complied with the rules and regulations of the Board.

Fees.—These are: Preliminary or Matriculation Examination, 10 dollars; Diploma or Licence to Practice, 20 dollars; annual subscription, 2 dollars; registration of additional degrees or title, 1 dollar. If a Candidate for the Licence or for the Preliminary Examination be rejected, he forfeits half the fees.

BISHOP'S COLLEGE UNIVERSITY FACULTY OF MEDICINE, MONTREAL.

THIS University confers the degrees of Doctor of Medicine and Mastery of Surgery. The degree of Mastery of Surgery (C.M.) is not conferred on any person who does not at the same time obtain the degree of Doctor of Medicine (M.D.) Each student must undergo, prior to the commencement of his medical studies, a Preliminary Examination upon the following subjects: English, French, Latin, Arithmetic, Algebra, Geometry, History, Belles-Lettres, and one of the following optional subjects: Greek, Natural and Moral Philosophy. Candidates for degrees must have been engaged uninterruptedly for four years in medical and surgical study; but a certificate of having studied one full year with a duly licensed practitioner reduces the period of study at the University to three sessions. Students must matriculate afresh at the commencement of every session, on or before the 1st of December. Every candidate for graduation must give sufficient evidence by certificates: 1. That he has attended two six months' courses of lectures on each of the following subjects: (a) General or Descriptive Anatomy, Principles and Practice of Surgery, Theory and Practice of Medicine, Midwifery and Diseases of Women and Children, Chemistry, Materia Medica and Therapeutics, and Physiology; (b) One six months' course or two three months' courses of Medical Jurisprudence, one six months' course of Pathology, one three months' course of Botany, of Hygiene, and also of Practical Chemistry and Microscopy, and also a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology and Pathology; (c) Not less than two six months' courses of Clinical Medicine and Clinical Surgery; (d) Two six months' courses of Practical Anatomy; (e) That he has attended for at least eighteen months, or three periods of six months each, the medical and surgical practice of a Hospital, in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons, and that he has been engaged for at least six months in compounding and dispensing medicines. That he has attended at least six cases of Midwifery.

Of the four years of medical and surgical study, one full course on each branch mentioned in sections a and b must be attended in this University.

Every candidate for the degree must, on or before the 1st day of March, deliver to the Dean of the Medical Faculty, a declaration, in his own handwriting, that he has completed his twenty-first year of age (or that he will have done so before the day of graduation); and a statement of his studies, accompanied with proper certificates.

Every candidate is examined both in writing and *viva voce*. The Examinations are divided into Primary and Final. The Primary examination comprehends Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, and Botany or Zoology. The Final Examination includes Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathology, and Hygiene.

Candidates may be admitted to examination on the Primary branches at the end of the third year of their study. The Final Examination does not take place until the candidate has completed his fourth year.

HALIFAX UNIVERSITY AND MEDICAL COLLEGE.

CANDIDATES for the degree of Doctor of Medicine must have attended lectures for at least four years after passing the Matriculation Examination. This examination comprises the following subjects: 1. *Compulsory*: English Language (including Grammar, Composition, and Writing from Dictation); Arithmetic (including Vulgar and Decimal Fractions and the Extraction of the Square Root); Algebra (to the end of Simple Equations); Geometry (first two books of Euclid); Latin (one book, Translation and Grammar). 2. *Optional*: One of the following subjects: History of England, with questions in Modern Geography; French Translation; German Translation; One Greek Book; Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics); History of Nova Scotia; History of the Dominion of Canada. The fee is five dollars, and is not returned in case of failure. Candidates for this examination must be at least 16 years of age. Graduates in Arts of recognised Universities are not required to pass the Matriculation Examination.

Instruction in medicine in the surgery of a recognised practitioner for one year is received as equivalent to a year of study.

The professional examination is divided into primary and final. The former comprises Anatomy, Chemistry, Materia Medica, Physiology and Botany, or Zoology; the latter, Medicine, Surgery, Obstetrics, and Medical Jurisprudence. Candidates may present themselves for the primary examination at the end of the third session, or third year of study.

Candidates for the final examination must produce certificates of having attended two six months' courses each of Anatomy, Chemistry, Materia Medica, Physiology, Surgery, Midwifery, Medicine, Practical Anatomy, Clinical Medicine, and Clinical Surgery; one three months' course each of Practical Pharmacy, Medical Jurisprudence, Botany, and Practical Chemistry; the practice of a recognised Hospital during twelve months; the practice of a Lying-in Hospital for at least six months (or of having attended at least six cases of labour); of having had three months' practice in Dispensing; and of having acquired proficiency in the practice of Vaccination. One session at least must be attended in the Halifax Medical College. Each candidate must present a thesis on some medical or surgical subject, and sign a declaration that he is twenty-one years of age. The examination is oral and written, in all branches; and there is a Clinical Examination in Medicine and Surgery at the bedside.

The fee for the degree of Doctor of Medicine and

Master of Surgery is twenty dollars, with a registration fee of one dollar.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

ALL persons, whatever qualifications they may possess, must be examined by this College in order to obtain a licence to practise in the province of Ontario.

Candidates for the membership of this College must spend four years (forty-eight months) in professional studies after having passed a matriculation examination in the English Language, Arithmetic, Algebra (including Simple Equations), Geometry, (first two books of Euclid), Latin (Translation and Grammar), and either Greek, French, German, or Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts, or students who have matriculated in Arts in any University in the British dominions, are not required to pass the Matriculation Examination; and Graduates in Arts may pass the final examination at the end of three years.

Every candidate must have attended, in an University, college, or school of medicine, two courses of six months each, in Anatomy, Practical Anatomy, Physiology (including Histology), Theoretical Chemistry, Materia Medica and Therapeutics, Medicine, Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine and Clinical Surgery; one course of six months, or two courses of three months each, on Medical Jurisprudence; one course of three months in Practical Chemistry and on Botany; one course of not less than twenty-five demonstrations on Histology, Physiology, and Pathology; and one course of twenty-five lectures on Sanitary Science.

The Professional Examination is divided into primary and final. The Primary Examination, at the end of the second winter session, comprises Descriptive Anatomy, Physiology and Histology, Theoretical and Practical Chemistry, Toxicology, Sanitary Science, and Botany. (Graduates in Arts who have attended one course of lectures on Botany, and two on Theoretical Chemistry, and have passed an examination in these subjects, are not subjected to further examination thereon.) The Final Examination comprises Medical and Surgical Anatomy, Theory and Practice of Medicine and Medical Pathology, Surgery and Operative Surgery, Midwifery and Diseases of Women and Children, Operative Midwifery, Medical Jurisprudence, and Materia Medica and Therapeutics.

Before being admitted to the Final Examination, the candidate must have spent six months in the office of a regularly qualified medical practitioner, in dispensing medicine; have attended the practice of a general hospital for twenty-five months; have attended six courses of midwifery; and have attained the age of twenty-one years.

The Primary Examination is entirely oral; the Final is entirely written. Any candidate who fails in any one branch at the Primary Examination is held to have failed in all. Any candidate who passes in four or more branches at the Final Examination, but fails in the others, is required to pass in the latter only at a subsequent examination. Persons intending to practise Homœopathy are, on application, examined by Homœopathic Examiners.

Persons from recognised colleges outside the provinces of Ontario and Quebec must pass the matri-

culcation examination, and afterwards attend one full winter course of lectures during two winter sessions in some one of the Ontario Medical Schools, and such other course or courses as may be necessary to complete the required curriculum; and must pass all the examinations.

The Fees are: Matriculation Examination, 10 dollars; Registration, for students not examined by the College Examiners, 10 dollars; Primary Examination, 20 dollars; Final Examination, including Registration, 30 dollars; Diploma of Membership, 10 dollars; annual contribution from members of the college, 1 dollar. No portion of the examination fees is returned to unsuccessful candidates.

TEXT-BOOKS.

THE object of the subjoined notes is to inform the student, in general terms, of the works which he may use as text-books. The list is not intended to be exclusive; nor is it our purpose to say always which book is the best in any subject. Some students learn best from one book; others from another. Again, some books are more adapted than others to the teaching of the school to which the pupil belongs. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied with advantage.

ANATOMY AND PHYSIOLOGY.

The anatomy of the bones is described in the chief text-books, such as those of Quain and Wilson; but there are also some special works on the subject. Among them are Mr. Luther Holden's *Human Osteology* (sixth edition, J. and A. Churchill). The same firm publishes a *Student's Guide to Osteology*, by Mr. Wagstaffe. There is also Mr. Norton's *Osteology for Students* (Baillière, Tindal, and Cox). The anatomy of the joints is specially and ably treated in Mr. Henry Morris's *Anatomy of the Joints of Man* (J. and A. Churchill). For the early study of anatomy, Mr. St. George Mivart's *Elementary Lessons in Anatomy* (Macmillan and Co.) will be found instructive. The interest of the subject is increased by a demonstration of the chief relations of the structure of man to that of other animals. Among the indispensable text-books treating of human anatomy as a whole are, Quain's *Elements of Anatomy* (Longmans and Co.), edited by Drs. Sharpey and Allen Thomson, and Mr. Schäfer; Gray's *Anatomy* (Longmans), edited by Mr. Holmes; and Wilson's *Anatomist's Vade-Mecum*, tenth edition, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow (J. and A. Churchill). Messrs. Smith, Elder, and Co. announce the early publication of the first part of a work on *Human Morphology, a Treatise on Practical and Applied Anatomy*, by Mr. H. A. Reeves. For use in the dissecting-room, Ellis's *Demonstrations of Anatomy* (ninth edition, Smith, Elder, and Co.) has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections*—a work which from its price the student can scarcely be expected to purchase, but which he should not fail to consult for assistance. Other good books for dissectors are Mr. Christopher Heath's *Practical Anatomy* (fifth edition, J. and A. Churchill) and Dr. Carrington's *Manual of Dissections of the Human Body* (George Bell and Sons). Dr. Cleland of Glasgow has also

brought out a concise and accurate *Directory for the Dissection of the Human Body* (second edition, Smith, Elder, and Co.); and a *Dissector's Guide*, with illustrations, by Dr. D. J. Cunningham, is published by MacLachlan and Stewart of Edinburgh. Messrs. Hensman and Fisher's *Anatomical Outlines for the Use of Students in the Dissecting-room and Surgical Class-room* (Longmans and Co.) is useful. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy (J. and A. Churchill), is a valuable book for reference. The drawings are made from plane sections of foreign bodies. There are also Professor W. Turner's *Atlas of Human Anatomy* (A. Johnston), Bock's *Atlas of Human Anatomy* (Renshaw), and Mr. Godlee's *Atlas of Human Anatomy* (J. and A. Churchill); also Mr. Flower's *Diagrams of the Nerves of the Human Body* (third edition, J. and A. Churchill). A *Descriptive Atlas of Anatomy*, by Mr. Noble Smith, has been published by Smith, Elder, and Co. There are also the well-known Quain and Wilson's *Anatomical Plates* (Smith, Elder, and Co.). Mr. Thomas Cooke's *Tablets of Anatomy and Physiology* (second edition) contain much information in a condensed form, and gives useful aid in the study of the larger works. A third edition has been recently published of Dr. J. H. Power's *Anatomy of the Arteries* (Fannin and Co.; Longmans and Co.; and Simpkin, Marshall and Co.). To students who feel interest in the study of Zoology and Comparative Anatomy, we would recommend, as works that will give much information without being too large or costly, Mr. Flower's *Osteology of the Mammalia* (Macmillan and Co.), and Dr. H. A. Nicholson's *Manual of Zoology, and Advanced Text-Book of Zoology* (Blackwood); as well as Huxley's *Manuals of the Anatomy of Vertebrated and Invertebrated Animals* (J. and A. Churchill), and Huxley and Martin's *Practical Biology*. Professor Gegenbaur's *Elements of Comparative Anatomy*, translated by Mr. F. J. Bell (Macmillan and Co.) is a very complete work. For the study of Embryology, the chapter by Dr. Allen Thomson in Quain's *Anatomy*, or the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour (Macmillan and Co.), should be consulted. The subject has been most ably treated by the late Mr. Balfour in a *Treatise on Comparative Embryology* (Macmillan and Co.).

For instruction in Histology, Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, and Co.) and Dr. Stirling's *Text-Book of Practical Histology* (Smith, Elder, and Co.) are excellent guides; as is also the chapter on General Anatomy in Quain's *Anatomy*. A third edition of Dr. Rutherford's *Outlines of Practical Histology* (J. and A. Churchill) is in course of preparation. The *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith (Smith, Elder, and Co.), is a valuable work for reference. Other works which may be consulted are Professor Stricker's collection of essays on *Human and Comparative Histology* (New Sydenham Society) and Heinrich Frey's *Histology and Histo-Chemistry of Man*, translated by Mr. Barker (J. and A. Churchill).

In Physiology, the beginner will find trustworthy guides in Huxley's *Lessons in Elementary Physiology* and Huxley and Martin's *Elementary Biology* (both published by Macmillan and Co.); and, as text-books for use in medical schools, Dr. McKendrick's *Outlines of Physiology in its Relation to Man* (Maclehose, Glasgow; and Macmillan and Co.), Kirkes's *Handbook of Physiology*, edited by Mr. Morratt Baker (tenth edition, John Murray), and Dr.

Michael Foster's *Text-book of Physiology* (new edition, Macmillan and Co.), are to be recommended; and, for more advanced students, Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (second edition, Smith, Elder, and Co.), Flint's *Text-Book of Human Physiology* (H. K. Lewis), and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power (ninth edition, J. and A. Churchill). The increased study in recent years of Practical Physiology has led to the publication of several guides to this department. Dr. Burdon Sanderson has prepared a manual of *Practical Exercises in Physiology* (second edition, H. K. Lewis). An *Elementary Course of Practical Physiology* by Dr. M. Foster and Mr. Langley (Macmillan and Co.) is also a book that can be recommended to beginners; while the more elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (J. and A. Churchill) is more fitted for those who desire an extended knowledge of practical physiology.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (sixth edition, J. and A. Churchill), Wythe's *Microscopist's Manual* (third edition, J. and A. Churchill), Marsh's *Section-Cutting* (second edition, J. and A. Churchill), and Martin's *Manual of Microscopic Mounting* (second edition, J. and A. Churchill).

CHEMISTRY.

In Chemistry, among the most approved text-books, are Fownes' *Manual of Chemistry*, edited, in two volumes, Inorganic and Organic, by Mr. Watts (twelfth edition, J. and A. Churchill); Roscoe's *Lessons in Elementary Chemistry*; Miller's *Elements of Chemistry* (Longmans and Co.); Bloxam's *Chemistry, Inorganic and Organic* (J. and A. Churchill); Williamson's *Chemistry for Students* (Macmillan and Co.); and Tidy's *Handbook of Modern Chemistry* (J. and A. Churchill). A little book by Mr. R. M. Murray, entitled *Chemical Notes and Equations for the use of Students* (MacLachlan and Stewart), gives an useful outline of the fundamental principles of chemical science. An elaborate *Treatise in Chemistry*, by Professors Roscoe and Schorlemmer, of Owens College, Manchester, is in course of publication by Macmillan and Co.; Bowman and Bloxam's *Practical Chemistry*, seventh edition (J. and A. Churchill), has an established reputation as a practical guide.

For instruction in Physiological Chemistry, there are Dr. Ralfe's *Outlines of Physiological Chemistry* (H. K. Lewis), and Mr. S. W. Moore's *Notes of Demonstrations in Physiological Chemistry* (Smith, Elder, and Co.). Dr. Arthur Gamgee's *Text-Book of the Physiological Chemistry of the Animal Body* (Macmillan and Co.), of which the first volume has been published, is likely to become a standard work on this subject.

BOTANY.

The text-books of Botany in most general use are Bentley's *Manual of Botany* (fourth edition, J. and A. Churchill); Henfrey's *Elementary Course of Botany*, third edition, by Dr. M. T. Masters (Van Voorst); Balfour's *Manual of Botany* (A. and C. Black); Oliver's *Lessons in Elementary Botany*; Prantl and Vines' *Text-book of Botany*. Sachs' *Text-book of Botany*, translated by Mr. A. W. Bennett and Mr. W. T. Dyer (Macmillan and Co.) is a

valuable work of reference in regard to Structural and Physiological Botany. Bentley and Trimen's admirable plates of *Medicinal Plants* (J. and A. Churchill) should be consulted by the student both of Botany and of *Materia Medica*.

MATERIA MEDICA AND THERAPEUTICS.

A well-known and useful book as a manual of *materia medica* is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Buchanan Baxter (sixth edition, Longmans and Co.). It requires however, to be supplemented by a treatise on therapeutics; for which purpose Dr. Ringer's *Handbook of Therapeutics* (ninth edition, H. K. Lewis), Dr. Waring's *Manual of Practical Therapeutics* (third edition, J. and A. Churchill), Dr. Alexander Harvey's *First Lines of Therapeutics* (H. K. Lewis), Dr. Farquharson's *Guide to Therapeutics* (second edition, Smith, Elder, and Co.), and Dr. Sparks's edition of Binz's *Elements of Therapeutics* (J. and A. Churchill), are to be recommended. Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (second edition, Macmillan and Co.) will be of value to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (Smith, Elder, and Co.) pays special attention to the therapeutic action of drugs. Other useful books are Dr. W. G. Smith's *Commentary on the British Pharmacopœia* (Smith, Elder, and Co.), Royle and Harley's *Manual of Materia Medica and Therapeutics* (sixth edition, J. and A. Churchill), Neligan's *Medicines*, edited by Mr. Macnamara (Fannin and Co.), Dr. Phillips's *Materia Medica and Therapeutics* (J. and A. Churchill); Dr. Whitla's *Pharmacy, Materia Medica, and Therapeutics* (Renshaw); Dr. Scoresby-Jackson's *Note-Book of Materia Medica*, edited by Dr. Moinet (fourth edition, MacLachlan and Stewart, and Simpkin, Marshall, and Co.), Dr. Handsel Griffiths' *Materia Medica and Pharmacy*, edited by Dr. Duffey (Baillière, Tindal, and Cox; and Fannin and Co., Dublin), Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (H. K. Lewis), Thorowgood's *Student's Guide to Materia Medica* (second edition, J. and A. Churchill), Milne's *Manual of Materia Medica and Therapeutics*, fourth edition, by Dr. W. Craig (Livingstone, Edinburgh; and Simpkin, Marshall, and Co.), and Dr. Phillips's *Materia Medica and Therapeutics* (J. and A. Churchill). Dr. Lauder Brunton's *Tables of Materia Medica* (Smith, Elder, and Co.) form a most comprehensive and valuable syllabus, and will be very useful to the student. So also are Dr. I. Owen's *Tables of Materia Medica* (fourth edition, J. and A. Churchill). Dr. W. H. Griffiths' *Lessons on Prescriptions, and the Art of Prescribing* (Macmillan and Co.) is a useful work. We have already referred, under the head of Botany, to Messrs. Bentley and Trimen's *Medicinal Plants*.

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medical Electricity* (Longmans and Co.), the following are likely to prove useful to students; viz., a *Text-Book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder, and Co.); a *Handbook of Medical and Surgical Electricity, and How to Use a Galvanic Battery*, by Dr. H. Tibbits (second edition, J. and A. Churchill); and Mr. A. de Wetteville's *Practical Introduction to Medical Electricity* (H. K. Lewis).

PATHOLOGY.

As a manual of pathology, Dr. T. H. Green's *Introduction to Pathology and Morbid Anatomy* (Renshaw) has gained a deservedly high reputation. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon (second edition, J. and A. Churchill), and Dr. J. F. Payne's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy* (J. and A. Churchill), are also good books. A second edition of an English translation of Virchow's treatise on *Post Mortem Examinations: the Art of Making them*, is published by J. and A. Churchill. Messrs. Smith, Elder, and Co. have published a *Manual of Necroscopy*, by Dr. A. H. Newth, which is intended as a guide to the performance of *post mortem* examinations. Dr. R. J. Lee has brought out a little book entitled *Pathological Anatomy: a Guide in the Post Mortem Room* (Richards, Great Queen Street). It is intended as an introduction to other works on the subject. We would also strongly recommend students to consult, and to possess, if possible, Rindfleisch's *Manual of Pathological Histology*, edited by the New Sydenham Society. Other highly valuable works for reference are Dr. Greenfield's translation of Lancereaux's *Atlas of Pathological Anatomy* (J. and A. Churchill), and an English translation of a *Manual of Pathological Anatomy*, by Cornil and Ranvier (Smith, Elder, and Co.).

MEDICINE.

For the student who is commencing his clinical studies there are several very good guide-books. Among them are Dr. A. W. Barclay's *Manual of Medical Diagnosis* (third edition, J. and A. Churchill), Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (fifth edition, J. and A. Churchill); Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, and Co.); Dr. Finlayson's *Clinical Manual for the Study of Medical Cases* (Smith, Elder, and Co.); Dr. J. Little's *Note-book for Students beginning the Study of Disease at the Bed-side* (third edition, Fannin and Co.); and Dr. Warner's *Student's Guide to Medical Case-taking* (J. and A. Churchill.) More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, and Co.) As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (Smith, Elder, and Co.) may be safely trusted. Other useful books for the same purpose are Flint's *Manual of Percussion and Auscultation* (J. and A. Churchill); and Dr. Reginald Thompson's *Physical Examination of the Chest in Health and Disease* (H. Renshaw).

Among text-books in General Medicine, which may be recommended for the use of the student, are Dr. F. T. Roberts's *Handbook of the Theory and Practice of Medicine* (fourth edition, H. K. Lewis), Dr. J. S. Bristowe's *Treatise on the Theory and Practice of Medicine* (fourth edition, Smith, Elder, and Co.), Dr. Tanner's *Practice of Medicine* (edited by Dr. Broadbent), Dr. Aitken's *Science and Practice of Medicine* (seventh edition, C. Griffin and Co.); Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (Smith, Elder, and Co.), Dr. Aitken's *Outlines of the Science and Practice of Medicine* (second edition, C. Griffin and Co.); Dr. Flint's *Clinical Medicine* (J. and A. Churchill); Dr. Charteris's *Student's Guide to the Practice of Medicine* (third edition, J. and A. Churchill); and

Dr. A. Carter's *Elements of Practical Medicine*. The advanced student and the practitioner will do well to consult Dr. Russell Reynolds' *System of Medicine* (five volumes, Macmillan and Co.); Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society); Ziemssen's *Cyclopædia of the Practice of Medicine* (Sampson Low and Co.); Dr. Niemeyer's *Text-Book of Practical Medicine* (H. K. Lewis); Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans and Co.).

SURGERY.

Mr. Erichsen's *Science and Art of Surgery* (seventh edition, Longmans and Co.), Mr. Holmes's *Surgery—its Principles and Practice* (third edition, Smith, Elder, and Co.), Mr. Bryant's *Practice of Surgery* (third edition, J. and A. Churchill), and Mr. Gant's *Science and Practice of Surgery* (second edition, Baillière, Tindal, and Cox), are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed works, there is the well known Druitt's *Surgeon's Vade-Mecum* (eleventh edition, J. and A. Churchill). Mr. Christopher Heath has brought out a *Student's Guide to Surgical Diagnosis* (J. and A. Churchill). Among the works more specially devoted to Practical Surgery, a foremost place is held by the late Sir William Fergusson's excellent *System of Practical Surgery* (fifth edition, J. and A. Churchill). Other books which may be consulted with advantage are, Mr. Holmes's *System of Surgery* (Longmans and Co.), Mr. Spence's *Lectures on Surgery* (A. and C. Black), Dr. S. D. Gross's *System of Surgery* (fifth edition, Smith, Elder, and Co.), and Billroth's *Lectures on Surgical Pathology and Therapeutics* (New Sydenham Society).

For the guidance of the student who is being instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (sixth edition, J. and A. Churchill) has for several years enjoyed a high reputation as a trustworthy guide. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans and Co.); Mr. Berkeley Hill's *Essentials of Bandaging* (fourth edition, Smith, Elder, and Co.); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (second edition, J. and A. Churchill); Mr. Joseph Bell's *Manual of the Operations of Surgery* (fourth edition, Macmillan and Stewart); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. Other larger works, most valuable for reference—and to be procured by the student if possible—are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, etc., illustrating surgical diseases, symptoms, accidents, operations, etc. (published in fasciculi by J. and A. Churchill); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates (J. and A. Churchill); and Mr. Norton's edition of Bernard and Huet's *Text-Book of Operative Surgery* (Baillière, Tindal, and Cox). For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans and Co.) and Surgeon-Major Porter's *Surgeon's Pocket-Book*, are essential. A translation, by Dr. Clutton, of Professor Esmarch's *Surgeon's Handbook on the Treatment of Wounded in War*, is also of value.

MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

The text-books of Obstetric Medicine which hold the first place in the present day are, Dr. W. S. Playfair's *Treatise on the Science and Practice of Midwifery* (fourth edition, Smith, Elder, and Co.); and Dr. Leishman's *System of Midwifery* (third edition, J. Maclehose, Glasgow, and Macmillan and Co.) Every student should have one or the other of these. For those who prefer smaller books, Dr. D. Lloyd Roberts's *Student's Guide to the Practice of Midwifery* (second edition, J. and A. Churchill) will be useful; there are also Dr. Alfred Meadows's *Manual of Midwifery* (Renshaw) and Dr. C. H. Carter's translation of Karl Schröder's *Manual of Midwifery* (J. and A. Churchill). Drs. Robert and Fancourt Barnes are preparing a *Handbook on Obstetrics* (Smith, Elder, and Co.) As a work of illustrations, Dr. Martin's *Atlas of Obstetrics and Gynecology*, edited by Dr. Fancourt Barnes (H. K. Lewis), is to be recommended. Dr. J. G. Swayne's *Obstetric Aphorisms* (seventh edition, J. and A. Churchill) are very useful. Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. and A. Churchill) should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (second edition, J. and A. Churchill). Dr. West's *Lectures on the Diseases of Women* (fourth edition, with additions by Dr. Matthews Duncan, J. and A. Churchill); Dr. Grailey Hewitt's *Diagnosis and Treatment of Diseases of Women* (third edition, Longmans and Co.); Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women* (J. and A. Churchill); the late Dr. F. Churchill's work on the *Diseases of Women* (sixth edition, Fannin and Co.); Dr. Edis's *Diseases of Women* (second edition, Smith, Elder, and Co.); Mr. Lawson Tait's *Diseases of Women* (Williams and Norgate); Dr. Emmet's *Principles and Practice of Gynecology* (second edition, J. and A. Churchill); Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women*; Dr. Heywood Smith's *Practical Gynecology* (J. and A. Churchill); and Mr. Spencer Wells's treatise on *Diseases of the Ovaries* (J. and A. Churchill), are all valuable books. Other books which will be found useful are Dr. Galabin's *Student's Guide to Diseases of Women* (second edition, J. and A. Churchill); Hart and Barbour's *Manual of Gynecology* (Macmillan and Stewart); and Simpkin, Marshall and Co.; and Dr. Halliday Croom's *Minor Gynecological Operations and Appliances* (Livingstone, Edinburgh); and Simpkin, Marshall and Co.)

Among text-books on Diseases of Children, must be mentioned Dr. West's well known *Lectures on the Diseases of Infancy and Childhood* (Longmans and Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (third edition, Fannin and Co.); Dr. W. H. Day's *Manual on the Diseases of Children* (J. and A. Churchill); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, and Co.); Meigs and Pepper's *Practical Treatise on Diseases of Children* (H. K. Lewis); Dr. Eustace Smith's *Clinical Studies of Disease in Children* (J. and A. Churchill); Dr. J. L. Smith's *Treatise on the Diseases of Infancy and Childhood* (fourth edition, H. K. Lewis); Dr. Tanner and Dr. Meadows' *Practical Treatise on Diseases of Infancy and Childhood* (third edition, H. Renshaw); and Steiner's *Compendium of the Diseases of Children*, translated by Mr. Lawson Tait (J. and A. Churchill).

SPECIAL SUBJECTS.

There are several good text-books of the special departments which are taught in the schools.—For students of Psychological Medicine, the chief work is Bucknill and Tuke's *Manual of Psychological Medicine* (fourth edition, J. and A. Churchill).—For students of Ophthalmic Surgery, Mr. R. B. Carter's *Treatise on Diseases of the Eye* (Macmillan and Co.); Mr. Nettleship's *Student's Guide to Diseases of the Eye* (second edition, J. and A. Churchill); Mr. Macnamara's *Manual of Diseases of the Eye* (third edition, J. and A. Churchill); Mr. Wharton Jones's *Manual of Ophthalmic Medicine and Surgery* (third edition, J. and A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (fourth edition, Renshaw); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder, and Co.), are books that will be useful. Messrs. Churchill have also published the second edition of a little book by Mr. Charles Higgins, entitled *Hints on Ophthalmic Out-patient Practice*. Dr. de Wecker's *Ocular Therapeutics*, translated by Dr. Litton Forbes (Smith, Elder, and Co.), may be consulted with advantage. Mr. E. A. Brown, of the Liverpool Eye and Ear Infirmary, has brought out a little book for instructing students *How to Use the Ophthalmoscope* (Trübner and Co.); and a valuable *Manual and Atlas of Medical Ophthalmoscopy* by Dr. Gowers (J. and A. Churchill) has been published.—In Aural Surgery, Mr. Dalby's book on *Diseases and Injuries of the Ear* (second edition, J. and A. Churchill) is very good; there is also a book by Mr. G. P. Field on *Diseases of the Ear* (third edition, Renshaw); while Dr. Burnett's work on *The Ear: its Anatomy, Physiology, and Diseases* (J. and A. Churchill), and Dr. St. John Roosa's *Practical Treatise on Diseases of the Ear* (fourth edition, H. K. Lewis) are valuable and elaborate works. Dr. Macnaughton Jones has brought out a good *Practical Treatise on Aural Surgery*, and also a well-executed *Atlas of the Diseases of the Membrana Tympani and Auricle* (J. and A. Churchill).—For the use of students in Dermatology, there is the late Dr. Tilbury Fox's treatise on *Skin-Diseases, their Description, Pathology, Diagnosis, and Treatment* (new edition, H. Renshaw). Mr. Malcolm Morris's *Manual of Skin-Diseases* is a very reliable guide. Mr. Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. and A. Churchill) are well known and valuable works. Dr. Pullar has translated the *Text-Book of Skin-Diseases*, by Dr. Neumann of Vienna (Hardwicke and Bogue). Dr. R. Liveing's *Handbook on Diseases of the Skin* (third edition, Longmans and Co.), is well deserving of recommendation; so also is Dr. McCall Anderson's *Treatment of Diseases of the Skin* (Macmillan and Co.) Dr. Tilbury Fox has supplied an excellent *Atlas of Skin-Diseases* (Renshaw); while a work with a similar title by Dr. Duhring of Philadelphia (Lippincott and Co.) is also very good.—For students of Dental Surgery, the following books are published by Messrs. J. and A. Churchill: Tomes's *Manual of Dental Surgery* (second edition); Tomes's *Manual of Dental Anatomy* (second edition); Taft's *Practical Treatise on Operative Dentistry* (third edition); Sewill's *Student's Guide to Dental Anatomy and Surgery*; Stocken's *Elements of Dental Materia Medica and Therapeutics* (third edition); and Coles's *Manual of Dental Mechanics* (second edition). A *Manual of Dental Surgery and Pathology*, by Mr.

A. Coleman, has been published by Smith, Elder, and Co.

FORENSIC MEDICINE AND HYGIENE.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (tenth edition, J. and A. Churchill), and Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw) are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (second edition, J. and A. Churchill); the *Handybook of Forensic Medicine and Toxicology*, by the late Dr. Bathurst Woodman and Dr. Tidy (J. and A. Churchill); Dr. Ogston's *Lectures on Medical Jurisprudence* (J. and A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book describes the manner in which medico-legal investigations are carried out on the Continent. The first part of a work on *Legal Medicine*, by Dr. C. M. Tidy (Smith, Elder and Co.), has lately appeared.

Under the head of Hygiene the principal books are, Dr. Parkes's *Manual of Practical Hygiene*, edited by Dr. de Chaumont (fifth edition, J. and A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science* (fourth edition, J. and A. Churchill); Dr. de Chaumont's *Lectures on State Medicine* (Smith, Elder, and Co.); Hart's *Manual of Public Health* (Smith, Elder, and Co.); and Hart's *Truth about Vaccination* (Smith, Elder, and Co.).

REVIEWS.

The Medical Digest, or Busy Practitioner's 'Vademecum', a Means of Readily Acquiring Information upon the Principal Contributions to Medical Science during the last Thirty-five Years. By RICHARD NEALE, M.D., Member of the Dutch Medical Society of Batavia, Java. Second Edition. London: Ledger Smith, and Co. 1882.

It is with feelings of much satisfaction that we record the appearance of the second edition of Dr. Neale's *Medical Digest*. It is probably within the cognisance of most of our readers that this laborious work, the first edition of which was published by the New Sydenham Society, was originally compiled by the author for his own use and without any thought of publication. It is not a mere index, such for example as the *Index Medicus*, but a Digest of the contents of most of the medical periodicals of the time. It is furnished with an admirable and copious Index, containing, it is said, nearly 10,000 references. We have tested the work in every possible way, and are astonished at its wonderful accuracy and at the stores of information which it contains. Dr. Neale appears to have made a note of every subject that could by any chance prove of interest to medical men. Let us take a few examples. It is probable that at the present moment many teachers in our schools of medicine, both in London and in the Provinces, are interested in the subject of Introductory Addresses, many perhaps being in doubt and tribulation as to the terms in which to address their students on the first of October. Their difficulties need be of short duration, for they have only to turn to the *Digest* to find references to the utter-

ances of Paget, Erichsen, Reynolds, Salter, Stokes, Hinton, and a host of others whose names with us are as household words. Again, let us suppose that information is required as to the mode of obtaining a medical degree. Dr. Neale answers us, and in a moment tells us how we can best learn about the Brussels M.D., the London M.D., the M.D.'s of the German Universities, and many others. If we want references to the therapeutics of recent remedies we are afforded a ready means of obtaining the required information. On glancing through the Index we find mentioned agaric, chaulmoogra, cheken, grindelia, hamamelis, homatropia, hydrastis, iodoform, jaborandi, muscarine, nitro-glycerine, papaya, pepsine, pituri, woorara, and many others too frequently omitted even in our standard works on *materia medica*. As we have said, the book is a kind of universal reference work, and it contains many apparently strange headings, such as 'Chimney on Fire', 'Cotton Famine', 'Gull, Johnson, Bravo Case', 'Livingstone Pills', 'Look-at-his-face Disease', 'Louise Lateau', 'Lucid Intervals', 'Lucifer Matches', 'Lunar Influence', 'Perambulators', and 'Wives of Medical Men, Social Pariahs'. There are some misprints, but fewer than might be expected in a book containing over 20,000 distinct entries. Of the value of the work, it is impossible to speak too highly. Writers on medical subjects are so accustomed to use it that they could not possibly do without it. The author tells us that it took him thirty-five years to compile, and it is certain that in almost any country but our own he would receive some State recognition. As it is, he has the satisfaction of knowing that he has conferred an inestimable boon on all who are engaged in medical work in any shape or form.

WILLIAM MURRELL, M.D.

Catalogue of Surgical and Physiological Instruments, etc. Newcastle-upon-Tyne: Brady and Martin.

THIS is a well-arranged catalogue, including the best and most recent forms of instruments now used by surgeons, and not rendered unnecessarily bulky by descriptions and illustrations of instruments now out of date. The alphabetical arrangements of the different sets of instruments, with secondary headings, seems to be very convenient. The illustrations are numerous and well-executed, and, doubtless, would give a good idea of the instruments and apparatus which they are intended to depict. Those marked 90 and 91, and illustrating what are stated to be cases for hypodermic syringes, are inserted, we imagine, rather for show than for serious use. Figures 42, 89, 173, seem to give a very good impression of the cases and sets of instruments they are intended to illustrate. The Catalogue, though it does not contain many instruments that are quite new, gives all the instruments that are likely to be required by medical men and practical physiologists. We find illustrated a good form of Dudgeon's sphygmograph, Cook's ingenious form of vaccinator, and a good form of steam-spray apparatus, with a special gauge, showing pressure to 80 lbs. There is a very full and convenient list of chemical apparatus, suitable for medical officers of health and public analysts. The second section, devoted mainly to objects used in microscopical and physiological work, mentions almost every article that is likely to be needed by advanced observers, including the latest dyes. Some little revision will probably be needed in future editions of this Catalogue.

NEW INVENTIONS.

CELLULOID HYPODERMIC SYRINGES.

Celluloid is one of those vegetable composition which it has from time to time been attempted to utilise for various purposes in the place of wood, India-rubber, and leather. It has been extensively used by dental surgeons in the manufacture of plates for carrying artificial teeth, and is said to be superior for that purpose to anything that has previously been introduced. Messrs. Nicholls and Son are now utilising it somewhat extensively for many of the small articles hitherto manufactured of wood and India-rubber. Celluloid certainly surpasses all previous substances of similar character, not only in its adaptability to various uses in connection with surgical appliances, but in its attribute of appearing in some articles as hard as wood, while in others it is as elastic and pliable as the softest India-rubber. It has even been found advantageous as a substitute for glass for certain small instruments, such as the hypodermic syringe to which we shall presently refer. Celluloid, as supplied by its manufacturers, is a hard substance of considerable weight, has evidently been subjected to great pressure, and is of homogeneous character. It is supplied in any colour, and this colour partakes of the homogeneity of the substance; for, how much soever the mass may be softened, rolled out, run into moulds, and again hardened, the original colour still penetrates the whole mass. In melting or softening a block of celluloid, the atoms appear to distend themselves considerably, and, in forming it into such delicate instruments as catheters, no webbing is required; though hard, it is perfectly elastic, and may be tied, twisted, or bent into any form without the slightest injury. When shown to us as a stethoscope, we find it as hard as wood, and even less likely to break. For thermometer cases, pessaries, specula, etc., it is equally applicable; and, amongst the imitations we have seen, those of tortoiseshell, malachite, and amber were excellent examples. We append an illustration of the hypodermic syringes made by this firm. In place of glass, the manufacturers have found by experience that celluloid is better adapted for them. For this purpose the celluloid is by powerful hydraulic machinery pressed into seamless tubes of the required shape.

It is in this state nearly as transparent as crystal, and offers decided advantages over glass. Breakage is entirely obviated; the celluloid is not so sensitive to the changes of atmosphere, and, consequently, the piston is not so liable to derangement, and there is, therefore, little doubt that celluloid will shortly take the place of glass for this and kindred articles. These goods can be procured from all instrument makers, in town or country.



A NEW CERVICAL CURETTE.

The difficulty of removing the plug of ropy mucus which fills up, and, in some cases, hangs from the os uteri, as in chronic endometritis, cervicitis, etc., must have been experienced by every gynecologist; and its detrimental effects, by protecting the cervical walls from the action of the usual escharotics, and so retarding the patient's cure, must be sufficiently apparent.

It is usually recommended to clear the canal of mucus by the introduction of the probe, armed with wadding dipped in glycerine; but this is not at all sufficient, nor does the removal of such discharge, as can be seen through the speculum, give any idea of how much still remains, the coagulation of which, by the subsequent caustic applications, neutralises, if it do not altogether destroy, the desired effect of the remedy. The woodcut represents an instrument which has been found exceedingly useful by Dr. Alexander Duke of Dublin, in the cases here referred to.

It is simply introduced through the speculum into the cervix as far as it will go with facility, which is generally up to the inner os, but in some cases it will pass much further, owing to the relaxed condition of the parts. It is then rotated slowly several times, and withdrawn, when the top of the instrument will be found filled with tenacious mucus. A brisk shake will dislodge its contents, and it can be reintroduced till all the mucus is thus removed. The cervical canal is then in a fit condition to be acted upon by the usual applications, and Dr. Duke has found that by this simple means the time occupied in the treatment of the case can be very considerably shortened.

The curette has also another advantage, as the rotation of its blunt edges in the cervical canal destroys those granulations and enlarged follicles, for which some practitioners recommend the use of a sponge-tent. The instrument is nickel-plated, can be cleansed in an instant by being either held under a stream of water or rapidly whisked through the same, and it has proved so useful in the hands of Dr. Duke the inventor that he does not hesitate to make it known, in the hope that it may prove equally useful to others. The maker is Corcoran, Bachelor's Walk, Dublin.

PENTLAND'S CABINET OF MATERIA MEDICA.

Mr. Young J. Pentland of West Nicolson Street, Edinburgh, has recently introduced a compact and valuable little cabinet, specially prepared for examinations in materia medica. The case, which is of polished pine, is of the size of 13 in. by 8 in. by 6 in. It has a lock and key, securing a lift-up lid and a fall-down door in front, disclosing five drawers, neatly divided into small sections, separately labelled, and containing no fewer than 163 specimens appertaining to therapeutics. The accompanying illustration conveys a fair idea of the cabinet, the specimens selected for the composition of its contents having been decided upon with care and intelligence. Mr. Pentland has avoided introducing those commonplace substances, with which the merest novice in pharmacy should be conversant; his object being to make the student thoroughly familiar with those organic and inorganic materials that abound

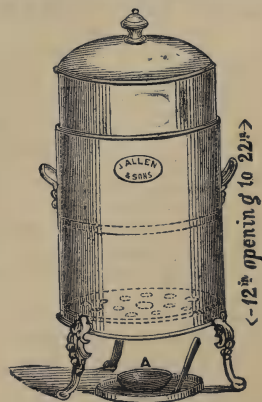
in the pharmacopœia, for a knowledge of which, unless he has had exceptional advantages, he is obliged to fall back upon an accumulation of dry or uninviting detail. Here the substance is placed under the observation of the learner, thus enabling him to over-



come many of his difficulties, and causing him to take an increased interest in his study, and so familiarising him with the objects that he will be able to recognise them at once in future examinations. The cabinet is very complete and handy, and the price at which it is offered (£2 10s.) will bring it within the reach of a large number of the young men now preparing themselves for the medical profession. Mr. Pentland has taken the opinion of several of the leading lecturers on materia medica, both in Scotland and England, as to the value of his cabinet to the student, all of whom have, we understand, expressed the most thorough approval of it.

A STEAMER FOR POROPLASTIC FELT JACKETS.

The accompanying diagram represents an useful apparatus manufactured by Messrs. J. Allen and Sons, 21 and 23, Marylebone Lane, a firm who have introduced several kindred appliances which have



been noticed in these columns on various occasions. The one now before us consists of a steamer for

softening poroplastic felt jackets previously to their application, for which it will be found an easy and convenient method, the operation being as follows. A perforated tray rests about 2 inches from the bottom inside the cylinder, and below this about two pints of hot water are placed. The jacket is now put in—the tray preventing it from coming into contact with the water—and the upper cylinder placed over it; this fits closely into the lower one by means of a packing round the bottom edge. A spirit-lamp holding sufficient spirit to vaporise the water stands under the vessel, and the steam thus generated softens and expands the jacket, the upper cylinder slowly rising as the expansion increases, until the spirit in the lamp is consumed, when the jacket will be ready for use.

IMPROVED CABINETS FOR MICROSCOPIC SPECIMENS.

Mr. J. B. Medland, of 12, Borough, London Bridge, whose efforts in the manufacture of cheap microscopic specimen cabinets has been favourably received by the profession, and whose preparations for histological work are extensively used by students in several of our leading hospitals, has recently brought out a compact little cabinet holding six dozen specimens, which he is offering at the moderate price of five shillings. The box is of polished mahogany, with a lift-up lid and fall-down front for the easy removal of the trays. The improvement consists in the fronts of the end pieces of the box being grooved with a tongue at either end of the fall-down front to fit into them. This makes a very perfect joint, and prevents the admission of dust into the case.

SELLERS' 'QUINQUININE'.

This preparation, made by Mr. Sellers, of Farringdon Road, represents the whole of the active principles of calisaya bark. In general appearance, it resembles ordinary sulphate of quinine, and possesses many of its characteristics. It dissolves readily in acids, forming a transparent colourless solution. It may be administered in the same doses as quinine, either as a tonic or as an antiperiodic. We understand that it is largely used in hospital practice.

MACKENZIE AND CO.'S COMPOUND COD-LIVER OIL EMULSION, AND OTHER PREPARATIONS.

The Compound Cod-Liver Oil Emulsion was introduced some years ago by Messrs. Mackenzie of Edinburgh, and is now so well known, that it is hardly necessary that we should refer at any length to its properties, especially as many favourable opinions have been expressed regarding its utility. It contains 50 per cent. of the finest cod-liver oil with six grains of hypophosphite of lime in each ounce, and a full dose of pepsine. It is a complete emulsion, the globules of oil being finely broken up, thereby securing complete assimilation. It will be found of much value in the treatment, not only of phthisis, but of scrofula, rickets, and many wasting diseases, both of children and adults. It is an invaluable preparation.

Messrs. Mackenzie and Co.'s special list of new remedies is very complete, and contains the names of many drugs that are undoubtedly of much value as therapeutic agents. Cascara sagrada, for ex-

ample, is an excellent remedy for constipation, and is now largely used both in this country and in America. Damiana has the reputation of being a powerful aphrodisiac, whilst grindelia robusta and quebracho are amongst our most valued remedies for asthma. Messrs. Mackenzie's preparations are excellent.

WILSON'S 'LINIMENTUM PLUMBI LACTATIS COMPOSITUM'.

This liniment was first introduced about two years ago by Mr. J. P. Wilson of Reading, and has since attained a high reputation as a valuable application in cases of burns, scalds, ulcers, and other conditions attended with local inflammation or irritation. It is an opaque whitish fluid, not unlike milk, and its value depends on the fact of the lead being in combination with albumen, and not with acetic acid, as in ordinary Goulard's solution. It is an astringent and sedative, and may, it is said, be applied freely without fear of inducing constitutional symptoms. Painted on with a large camel's hair brush, it is used with advantage in cases of eczema, especially in the acute stage, and to allay the specific heat and redness of the arm which sometimes follow vaccination. Its astringent properties make it of much value for checking discharges of various kinds, and it forms a most useful lotion or injection for otorrhœa, conjunctivitis, and leucorrhœa. It has a remarkable power of allaying itching and irritation, a property which makes it popular with patients, and should ensure its extensive use. We hear that it has been supplied to the troops in Egypt.

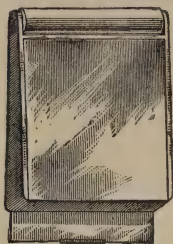
KANOLDT'S APERIENT TAMARIND LOZENGES.

The aperient tamarind lozenges, introduced by Herr C. Kanoldt of Gotha, are eminently suitable for a mild laxative for children, while they may be used with advantage by adults for the same purpose. These lozenges are made from the pulp of the tamarind fruit, the acids of which are neutralised by the addition of carbonate of magnesia; coated with chocolate, and covered with tinfoil they more resemble a sweetmeat than a medicine, are consequently readily taken by children, and have the further advantage of keeping in any climate. They are prompt and certain in their action, without producing griping pains, may be taken at any time, and do not necessitate any change of diet. Mr. Paul Metz, of 10, Jewin Street, E.C., has the sole English agency for their sale.

THE 'STAMPHIX', OR STAMP-HOLDER.

The 'stamphix' is a useful little invention introduced by Messrs. A. Collard and Co., of 211, Oxford Street, for the easy and rapid affixing of postage or receipt stamps, as well as being a receptacle for holding them. The accompanying illustration represents it of full size, and it will hold any number of stamps from one up to about two dozen. The stamps are placed in the box singly; and, when required for use, the envelope is wetted with the tongue, the box is placed on the wet part, the bottom, secured by a spring, is withdrawn, when the lowest stamp is attached, by at the same time pressing the lid with one of the fingers and holding the box for a second on the wetted surface. Should the stamp not be properly impressed on withdrawing the box, a little

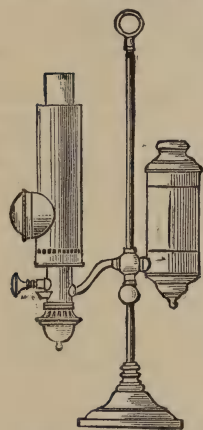
roller, shown in the engraving at one end, is passed over it, and the operation is complete. All this is the work of a moment, and we believe stamps may be affixed more readily by these means than by the



ordinary process. The stamping is made suitable for presents in gold, silver, oroid gilt, electro-plated, and also in plain metal, at a cost of one shilling each.

'THE DOCTOR'S' LAMP.

The Silber 'Doctor's' Lamp is one of the Silber Light Company's, Whitecross Street, well-known



reading lamps, adapted for laryngoscopic examinations, and when not required for this purpose it is equally useful for reading. The Doctor's Lamp can be had for burning colza oil, or any of the mineral oils known as kerosene, petroleum, or paraffin; it being only necessary when ordering to state which oil the lamp is required to burn.

The principles of the Silber Light are now so well known, that it is hardly necessary to do more than remind our readers that steadiness, purity, and brilliancy are its chief features, and that for the study, the consulting-room, as

well as dwelling-house, it is unsurpassed by any other light obtained from any description of oil.

DIETETIC NOVELTIES.

A NEW LIQUEUR.

'Liqueur Chateau Selbois' is the name appropriated to a cordial introduced by Messrs. E. G. Wastall and Co., the extensive wine merchants, of Ramsgate, Dover, and Margate. This liqueur is new only as far as the general public are concerned, having been in use for a long period in the families and amongst the friends of those who originally made it. Messrs. Wastall, having obtained the original recipe for this liqueur, have made certain alterations calculated to improve it. The orange flavour is clearly present, though not intrusively so, leaving an agreeable aromatic taste upon the palate, in which we may trace the faintest semblance to an orange bitter. Beyond the ordinary uses of a liqueur, Chateau Selbois is recommended on account of its carminative qualities, and for seasickness. It also forms a pleasant drink in conjunction with aerated waters and iced drinks, mixes well with sparkling wines, and forms a welcome addition in the preparation of punch. Chateau Selbois will also be found an agreeable and wholesome liqueur for after-dinner use.

KEMMERICH'S EXTRACT OF MEAT.

This extract of beef, prepared by E. Kemmerich and Co. on their estate at Santa Elena in the Argentine Republic, is introduced into England by Messrs. Rockwood and Co., of Long Lane, E.C., and comes to us with good credentials from some of the leading professors on the continent of Europe, and a satisfactory analysis by Dr. Hassall. A two-ounce pot of this extract is said to contain the constituents of 5 lbs. of meat, which is a pound more than is claimed by some of the best preparations before us, and this, coupled with the fact that it is offered to the trade at a less price, makes the Kemmerich extract cheaper than most other extracts. Dr. Hassall says, 'It possesses an advantage over similar preparations, containing a relatively smaller amount of water, and a greater proportion of solid constituents of meat.' The reason assigned by the proprietors for being enabled to offer their production at a lower rate is, that their mode of preparation is of a more economical character than that usually adopted; and, having an almost inexhaustible supply of wood upon their estate, an abundance of fuel is at command, which advantages enable them to cheapen the first cost. Another improvement on which great stress is laid, is the improved construction of the pots in which it is sent out. These are made with screw-down lids of earthenware, which, with the assistance of a simple washer, are calculated to make a hermetic seal with the least possible labour.

CONROY'S MALT COFFEE.

Conroy's Malt Coffee is a combination of carefully selected malt with the very best coffee, prepared by a new and special process. It makes a pleasant beverage, which is readily taken by dyspeptics and others with whom ordinary coffee disagrees. The value of malt as a digestive agent is so generally recognised, that this special preparation cannot fail to become popular both with the public and with their medical advisers. We have given it a trial, and are much pleased with it. Messrs. Evans, Son, and Co., of Liverpool, are the manufacturers.

MISCELLANY.

ARTIFICIAL AERATED WATERS—Another striking evidence has been afforded, by the outbreak of a small epidemic of typhoid, of the carelessness with which some manufacturers of artificial aerated drinks employ sources of water not free from suspicion or elements of danger. It is commonly enough supposed that, where the water-supply is suspicious, safety may be found in the soda water, seltzer, or ginger-beer. This, however, obviously depends upon the purity of the water employed in their manufacture. Little as this is regarded, it deserves much more consideration than it generally receives. It is the last cause of infection to be investigated; but the observation on a former occasion, by Dr. Thursfield, of an outbreak of typhoid due to the consumption by a shooting party of soda water made with impure water, has been followed this month by a sharper and more extended attack of typhoid due to ginger-beer made with similarly infected water. Pure natural mineral water has of late years become the resource and luxury of a large part of the population, and such accidents as this are likely to strengthen the habit. None the less, it is important for sanitarians to keep an eye to the now plainly proved source of infection, developed in the unexpected direction of artificial aerated waters.

THE CANADIAN MEDICAL ASSOCIATION held its annual meeting in Toronto on the 6th, 7th, and 8th of the present month.

The London Medical Record.

The Publishers of the LONDON MEDICAL RECORD invite offers of back volumes or sets of this periodical.

DR. NORRIS'S THIRD CORPUSCLE OF THE BLOOD: A CRITICISM AND REFUTATION.*

IN a recently published monograph, Dr. Norris develops his theories regarding the morphology of the third or invisible corpuscle of the blood which he claims to have discovered, and describes anew in further detail his methods of research, and the appearances on which he founds his views. The book is profusely illustrated by 196 photographs of great excellence, and Dr. Norris's views and the deductions drawn from them are set forth with perspicuity.

The first part of the book consists of a republication of his original essay on the discovery of the third or invisible corpuscle, which paper was read at the Birmingham Philosophical Society in November 1878, and published immediately afterwards. This chapter, though essentially a republication, differs, notwithstanding, in many important respects from the original paper; the alterations being, as I shall hereafter show, apparently in a large measure due to certain criticisms which I ventured to publish in this journal in January 1880, after repeating parts of Dr. Norris's research. No explanation, however, either in foot-note or in preface, is given of the alterations, nor of the changes in the author's views which they indicate; an omission which is the more remarkable, as part of the book professes to reply to my objections, without mentioning that the present text has been, in republication, modified in many important respects to parry them. This first chapter is followed by a long reply to the criticisms of his methods and results which I published in this journal in 1879. Dr. Norris then proceeds to give an account of further researches, to describe the best methods of staining the invisible corpuscle, and to endeavour to show the identity between his third corpuscle and the hæmatoblasts of Hayem, and the *small plates* of Bizzozero; and, subsequently, in elaborate chapters on leukæmia and anæmia, he seeks to demonstrate that his theory of blood-formation gives a sufficient explanation of the pathology and symptoms of these diseases.

Since the first publication of his research, Dr. Norris has seen reason to entirely change his views regarding the nature of the white blood-corpuscle. In his first paper, he stated that he was unable by any legitimate means to discover the presence of a nucleus in the white corpuscle or in the lymph and splenic corpuscle, and that he considered the appearance of nucleation to be entirely due either to reagents or to faults in manipulation. He taught then that these corpuscles consisted of a single sac or of an aggregation of sacs, which sacs often ruptured, as the result of manipulation, and discharged their fluid contents. This fluid then ranged itself round the shrunken sac-wall, and thus gave the false appearance of nucle-

ation. It was pointed out in my criticism, that Professor Ranvier's observation of the division of the nucleus in the living white blood-corpuscles of the axolotl militated against this theory; subsequent observations have, however, led Dr. Norris to see the error of his first opinion, and to accept the usual teaching regarding the nucleation of the white and the lymph corpuscle; and where in the original the word cavity was used when speaking of these cells, the word nucleus is now substituted.

Dr. Norris's present views may be briefly stated to be as follows. He holds that the small uninucleated corpuscles, which are seen in such abundance in the lymph- and blood-forming organs, belong to the first stage in the formation of red blood-corpuscles, and that the nuclei of these bodies, while remaining in the gland or in their passage through the thoracic duct, free themselves of the surrounding close-fitting granular cell-wall. This is accomplished by a kind of peeling off of the outer covering; and many photographs of the process are given. What becomes of the *débris* of the discarded cell-walls, he does not explain. Thus, it will be seen, Dr. Norris describes two forms of lymph-corpuscles, the primary or uninucleated corpuscle, and what he calls the *advanced lymph-disc*, which is actually the free naked nucleus of the lymph-cell. This nucleus he describes as transparent, colorless, and homogeneous, discoid in shape, and in size somewhat smaller than the normal red disc. Advanced lymph-discs may be, he states, found in the lymph-glands; but they are present in larger numbers in the thoracic duct, whence they are poured into the blood-current, together with the primary nucleated cells. The latter are to be recognised in the blood, as uninucleated white blood-corpuscles. The advanced lymph-disc is, however, incapable of being seen in the blood, owing to its colorlessness and transparency, and to it possessing the same refractive index as the liquor sanguinis. These invisible corpuscles gradually become colored by endogenous secretion of hæmoglobin, until they attain the color and appearance of the normal red corpuscle. The biconcave form is due, he considers, to physical causes, and is brought about as soon as the lymph-discs are poured into the liquor sanguinis. The granular and nucleated lymph-corpuscle develops, by division of its nuclei, into the multinucleated white corpuscle. These nuclei may, he assumes, become free, pass into the invisible condition, and finally develop into red corpuscles; though, on this much-disputed and long-investigated point, his researches throw no fresh light and afford no new evidence. He simply asserts the fact as one proved. In his early paper, he declared that the objections to this view were to his mind unanswerable. As the invisible corpuscles have a great tendency to break down, and to adhere in small granules to the surface of the glass, from which centres processes of fibrin may be seen to issue, Dr. Norris asserts that Hayem has mistaken the nature of these fragmentary granules, and described them as his 'hæmatoblasts'. With regard to the part played by the red nucleated cells of the bone-marrow in blood-formation, Dr. Norris holds that the red disc is the ultimate growth of the nucleolus of a nucleated cell, which has become free by the consecutive disintegration of the cell-wall, the nucleus, and the envelope of the nucleolus, which process, he states, he has been able to follow; and he gives photographs purporting to represent these bodies in the process of gradually freeing themselves of their successive envelopes. Many of these cells become

* *The Physiology and Pathology of the Blood.* By Richard Norris, M.D. London: Smith, Elder & Co. 1882.

colored in the bone-marrow, though a large number, he contends, pass over into the blood-current in the invisible state. As to Professor Rindfleisch's theory of the emigration of the nucleus from the red nucleated cell, the red disc being formed by a remoulding of the body left behind, he suggests that the appearances on which that theory is based are probably due to accident in the preparation. Of the large amount of inert *débris* left behind by the process of disintegration described by Dr. Norris, he gives no account, nor of the means by which it may be absorbed. He allows, however, that, besides the method already described, the red discs of the human embryo and some adult lower animals may be also produced by atrophy and absorption of the nucleus of the red nucleated cells of the bone-marrow *in situ*.

Leukæmia Dr. Norris considers 'to be due to a hyperplasia of the lymphoid organs, inconsistent with that lengthened stay of the products in these organs which is necessary to the decapsulation of the primary lymph-disc, and the setting free of its nucleus as the advanced lymph-disc.' Nucleated corpuscles thus pass in great numbers into the blood, before they have had time to be changed into invisible discs. Anæmia he considers to be due to a diminution of the vitality of the lymph-discs, which leads to a reduction of their life-period, and therefore to decrease of their numbers; and, as hæmoglobin is gradually obtained in the blood in equal quantities in equal times, a deficiency of hæmoglobin in the corpuscles results. This theory does not, however—it may be noted in passing—explain those cases of pernicious anæmia in which the number of red corpuscles is enormously decreased, but the proportion of hæmoglobin per corpuscle is above the average.

The *advanced lymph-disc* of the lymph, and the invisible or slightly colored corpuscle of the blood, are, according to Dr. Norris, the fibrin-factors, and produce fibrin either by spreading into fine films, or by melting down into plasmin pools, or, in the more usual manner, by sending out fine fibrils from, and of, their own substance. The blood-corpuscles of the ovipara are, he argues, identical in their genesis and changes with those of the mammal, being divisible in the same way into invisible or *fugitive* and colored or *permanent* groups; and he states that the colorless protoplasm of the young nucleated cells is the part which breaks down into fibrin.

Such, briefly, is Dr. Norris's theory of blood-formation. The theory is in itself complete, and assumes to explain some of the darkest secrets of physiology. It is with genuine regret, therefore, that, after long and patient investigation of the subject, I am forced to the conclusion that it is based upon illusions engendered by Dr. Norris's peculiar methods of working. The whole theory rests upon the basis of the demonstration of the existence of invisible corpuscles as normal constituents of the blood. If it be found that these are not normally present in the blood, but are merely produced and made apparent by his methods of treatment, whilst on the other hand they cannot be discovered by the most diligent investigation, when methods conservative of the blood-corpuscles are used, then Dr. Norris's whole theory falls to the ground. Delicate and unstable as are the blood-corpuscles, so careful and exact must be the conditions under which they are examined after quitting the vessels, so guarded and cautious must be the deductions drawn from appearances presented under the microscope; in fact,

it might be urged with justice that only observations made on the living corpuscles, circulating in the vessels of the living animal, are finally trustworthy. Failing this, means should always be taken to preserve the corpuscles from change, or to ascertain beyond doubt that the appearances seen and described are not due either to reagents, to abnormal conditions, or to *post mortem* changes. Many and alluring have been the theories about the blood, advanced and supported on data that were vitiated by fallacies arising from some one or other of these causes.

Some readers of the LONDON MEDICAL RECORD may remember that, in the article which I published in 1880,* after a laboratory research on Dr. Norris's methods, I pointed out that his methods of demonstrating the existence of the invisible corpuscle were open to the fatal objection of themselves creating the appearances he described as normally existing. Dr. Norris has honored me by a long reply to my criticism in his book, and by making important alterations in his original text, in deference to many of my objections. I have therefore submitted the subject to a still further practical investigation, repeating the experiments which Dr. Norris declares to be crucial, and am thereby led to believe that the following remarks may throw further light on the subject.

As a source of fallacy in Dr. Norris's method of packing, I pointed out in my paper 'that the corpuscles are here subjected to an extreme degree of pressure. They are drawn by the force of capillary attraction between two glass surfaces bound firmly together, until they reach a spot which they cannot pass by reason of the close contact of the two glasses. They, therefore, become wedged in and are subjected to the action of two forces, the capillary attraction which is drawing the liquor sanguinis from around them, and the pressure, above and below, of the glasses between which they are tightly wedged.' Dr. Norris has, evidently, seen the full fatal force of this objection, and parries it rather than meets it. He states that (p. 49) he prefers to regard the condition as one of 'coercion of form', induced by the proximity of the glasses, which coercion of form causes the corpuscles to become flattened, thinned, and paler. To deny pressure, but to admit physical coercion of form is a type of argument which, I believe, is sometimes characterised as feminine, which whilst denying, it gives consent. The distinction made can scarcely be allowed to constitute a difference. In the familiar example of a boy's nose flattened against a pastry-cook's window, it is obviously immaterial whether it be said to be subjected to pressure, or to be in a condition of coercion of form. The simple physical fact is unaltered. In the first publication of Dr. Norris's paper, in 1878, he states that 'the conjecture, that invisible corpuscles are red discs which have lost their color, as a preliminary step to their dissolution, has no facts to lend it support.' I subsequently pointed out, in my paper, that, by the packing method, all the corpuscles become paler as they pass towards the point of contact in the glasses where the iridescent lines, called the rings of Newton, are produced, in consequence of loss of hæmoglobin, which substance may be found again, by means of the micro-spectroscope, in the serum filtered off on the other side of the rings. Dr. Norris replies in the present monograph, that he knows 'of no method of decolorising a blood corpuscle, except that

* LONDON MEDICAL RECORD, January 15th, 1880.

of solution of its hæmoglobin'; and that 'supposing pressure to be present, it could never discharge the color from such bodies as the mammal blood-corpuscle,' the color being in chemical combination (p. 47). On a later page, however (p. 52), it will appear that subsequent observations have obliged him to change his opinion; for he states that 'the question of the effects of direct pressure upon the mammal corpuscle has been carefully investigated, with the result of showing that corpuscles can be made in this way to give up some of their hæmoglobin, as evidenced by their becoming paler, and by the liquid becoming stained.' It is curious that statements so contrary and mutually destructive should be allowed to stand in the same volume. Elsewhere, however, he implicitly admits the correctness of my observations, and virtually accepts my explanation, in the following words (p. 49): 'It is quite true that as the corpuscles pass within the outermost system of rings they become paler, and this because they become thinner, a fact which is known by the increase of their diameter. As the liquor sanguinis becomes more charged with hæmoglobin (derived from the mass of corpuscles, and not from one more than another), the flattened corpuscles will become more and more obscured, indistinct, and faint, because the contrast between them and their surroundings becomes less and less. Under such circumstances they may become barely visible, and, perhaps, quite invisible; and this not because they have become colorless, but because the liquor sanguinis has become colored up to a like intensity with themselves.' And again (p. 51): 'This faintness of the corpuscles is due to two causes. Firstly, they are flattened, owing to the proximity of the glasses; and, secondly, the contrast between them and the liquor sanguinis is diminished, owing to the colorisation of the latter.' The two facts which I pointed out in my criticism, (1) that in the packing method the corpuscles are subjected to undue pressure, and (2) that hence they lose their hæmoglobin, are here, it will be observed, admitted by Dr. Norris. Another theory is, however, introduced to explain the tinting of the liquor sanguinis, in such a manner as may reconcile it to Dr. Norris's views of the origin of the colorless corpuscle. He contends that all red corpuscles lose hæmoglobin in an equal ratio, and that there is no difference in quality between these bodies. That this is not the case is, however, a matter of actual observation; and the difference of the corpuscles in stability, and in their power of resistance, may be demonstrated by very simple methods. I have repeatedly found that, if red blood-corpuscles be subjected to the action either of a saturated solution of common salt, a 33 per cent. solution of alcohol, or an aqueous solution of eosin, a certain number of the corpuscles become colorless at once, while others resist and preserve their normal form and color; but the longer the corpuscles are kept in contact with the reagent, the greater the number that fall under its influence; thus showing that there is a marked difference in the power of resistance between the corpuscles. This is not difficult to understand, when we remember that these bodies are constantly being renewed, and are subject to decay and death. In fact, on Dr. Norris's own hypothesis, and on his admission that all the corpuscles part, when subjected to the pressure of the packing glasses, with an equal quantity of hæmoglobin, it is obvious that, by this process, some among them must become in-

visible; for, in a later chapter, he gives elaborate calculations to show that the invisible corpuscle becomes visible by forming equal quantities of hæmoglobin in equal periods of time, the life-history of a red corpuscle extending, on an average, over about three weeks. He teaches that the younger a corpuscle is, the more unstable is its condition; hence it is obvious that if, as I contend, and as Dr. Norris admits, hæmoglobin is extracted from the red corpuscles by the withdrawal of the serum under pressure, numbers of the corpuscles, which, according to Dr. Norris, have only obtained, as yet, a small amount of color, would become invisible in the process. Whether these corpuscles which become invisible are young and immature bodies, as he asserts, or degenerate corpuscles with a low power of resistance, as I am inclined to believe, is another question. I may mention, as a point which throws some light on the origin of the invisible corpuscle, that I have found that the power of resistance of the red corpuscles is much decreased in organic diseases, such as cancer or phthisis; and that the blood-corpuscles lose their hæmoglobin and become invisible, when acted upon by reagents, much more rapidly in these cases than in those of the blood of healthy persons. It is easily understood how, in respect to this unequal resistance, the least resistant of the corpuscles lose all their hæmoglobin, and become invisible when subjected to the forces at work in the method of packing. In fact, I have, as I stated in my paper, frequently observed this change take place under my own eyes. The corpuscles being packed in single layers, I have seen some among them swell, become paler, and finally invisible, leaving the characteristic colorless spaces photographed by Dr. Norris, while others retained their normal tint for an indefinite time. This fact seems to me conclusive against Dr. Norris's explanation, that the serum becomes tinted by all the corpuscles losing hæmoglobin in an equal ratio. It also indicates that the attempt to demonstrate the existence of the invisible corpuscle as a normal constituent of the blood, by the method of packing, is delusive and untrustworthy.

One of the methods recommended by Dr. Norris to render the invisible corpuscle apparent, is to change the refractive index of the serum by adding a saturated solution of common salt to the blood immediately it is drawn. Certainly the number of invisible corpuscles rendered visible by this simple expedient is quite remarkable. In my paper, however, I pointed out that the effect of a saturated solution of common salt on the red corpuscles is to cause about one-third of their number to discharge their hæmoglobin and to become transparent, and that these corpuscles, decolorised by the action of the salt, had been misinterpreted by Dr. Norris, and described by him as normally existing in the blood. On referring to my notes on the experiments of control which I carried out in October and November of 1879, before reviewing Dr. Norris's work, I find a record of exact observations on the action of salt. Enumerations of the red corpuscles were made by means of Gowers' hæmacytometer and Potain's mixer, after mixing the blood with the preservative 5 per cent. solution of sodium sulphate, and at the same sitting mixing blood of the same subject with a saturated solution of sodium chloride, and the results were compared. In one experiment, the mean counting gave 4,920,000 corpuscles per cubic millimetre with the 5 per cent. solution of sodium sulphate, and 3,260,000 with the saturated solution of sodium chloride:

1,660,000 corpuscles had therefore been rendered invisible by the action of the sodium chloride. I also found that, if I fixed the ruled cell, and counted the corpuscles resting on a few squares, and then left the slide untouched for several hours, the action of the sodium chloride on the corpuscles was progressive, a greater number of corpuscles falling under its influence and becoming invisible; while in identical conditions the corpuscles might be kept almost indefinitely in the 5 per cent. solution of sodium sulphate without change. To my objection to the use of a saturated solution of common salt, Dr. Norris replies in the present monograph (p. 62) that it was very well known to him that a certain number of the red discs disappeared in a concentrated saline solution; but he contends that its power of dissolving hæmoglobin is limited and soon satisfied, and that its action is identical on *all* the corpuscles alike, from all of which it extracts a minute quantity of coloring matter. It, nevertheless, seemed to him, he says, a matter of small importance, that, after having satisfied himself of the existence of corpuscles that could not be seen, a few more should be added to the invisible set by the action of the salt. Dr. Norris forgets, however, that he has to satisfy other observers besides himself, and that, when it is a question of the actual existence of the invisible corpuscle, it can scarcely be considered a matter of small importance that 1,660,000 out of 4,920,000 should be artificially converted from the visible to the invisible condition by the very agent by which he seeks to demonstrate it as a normal element of the blood. To eliminate all sources of error is avowedly the first step in a scientific investigation; and that so great a source of error should have escaped Dr. Norris is a matter of some surprise. This solvent action of common salt seems, however, to have been hardly as present to the mind of Dr. Norris as he now supposes, since in the first publication of his paper (that is, the paper which I criticised), he recommended saturated solution of common salt as the basis of the staining fluids to be used, and further (p. 14) in the same paper, he directed that '*in all cases*' in which blood is obtained for examination, it should be passed at once into an ammoniated solution of carmine, in a saturated solution of common salt, with the object of both staining and preserving the invisible corpuscle, and the formula for this staining fluid is given in full. On this plainly stated direction I commented, saying, 'It would be interesting to learn from Dr. Norris if all the photographs in his paper were taken from specimens of blood which had first been subjected to the action of the saturated salt solution.' Dr. Norris now expresses great astonishment at this 'remarkable statement' of mine; and, indeed, on referring to the present republication of his paper, in the first chapter of the monograph, no warranty can be certainly found in the existing text for my inference; for Dr. Norris has carefully expunged the words, 'in all cases', which stand in the original, and also the formula for the staining fluid. In fact, in all the directions given in the present volume for staining, where the words 'saturated solution' stand in the original, 'three quarters per cent. solution' is now substituted; so that, on reading Dr. Norris's republished paper, often altered in an exactly opposite sense to the original, without explanation in footnote or preface, and his reply to my criticism on the original text, published now for the first time in the same volume with the altered text, it is sometimes difficult to discover to what my strictures allude.

To the method of 'isolation', I objected in my early paper that the effect of the sudden withdrawal of the serum on the more unstable of the corpuscles had not been sufficiently taken into consideration; and I find that in the present volume Dr. Norris himself allows that the more unstable corpuscles can ill bear the withdrawal of the serum, and also gives force to my view in the words: 'A structure is only the same structure so long as it remains in the same surroundings'.

Thus far, then, Dr. Norris has in no way improved the scientific acceptability of his views, or shaken the adverse conclusion to which I was led by repeating his experiments; namely, that the invisible corpuscle is the artificial production of his methods, and is nothing else than a red corpuscle decolorised out of the body, and not an actual living corpuscle of the blood. He urges, however, that I have not fully repeated all his methods, and considers that some are quite unobjectionable, and are not liable to the sources of error already indicated. Those on which he specially relies are the preservative action (1) of absolute alcohol; (2) of a 2 per cent. solution of osmic acid; (3) of a .75 per cent. solution of sodium chloride; and (4) of a soluble colloid; and (5) the demonstration of the existence of the invisible corpuscle in fresh blood by impact and packing, when it is run under thin flexible mica covers. I will examine these *seriatim*.

As to the first, Dr. Norris directs that with glasses prepared for the isolation method, absolute alcohol be first run between the cover-glass and slide, so that the whole of the space may be filled; a drop of blood placed then on the edge rapidly insinuates itself, and mixes with the alcohol. On now raising the cover-glass, groups of colored corpuscles are found adhering to the surfaces of the glass. This is quite true. Unfortunately, however, Dr. Norris has failed previously to note the action of absolute alcohol on the corpuscles. Its action can be observed with great facility by his ingenious method of packing. Let blood be run under glasses prepared for packing, and time given to the corpuscles to pack; then let absolute alcohol be introduced on the opposite side of the rings of Newton. The fluid enters by capillarity, and its action on the stationary corpuscles can be easily watched. When it reaches the corpuscles in an undiluted condition, its first effect is to instantly disintegrate them into minute granules. As, however, it advances and becomes diluted by the serum, it acts upon the corpuscles less violently, but in the same way as does alcohol diluted with water, causing them to discharge their hæmoglobin and to become transparent. This action of dilute alcohol on the red corpuscles is well known. The same effect can be watched when absolute alcohol is introduced first under the isolation glasses, as directed by Dr. Norris.

Secondly, Dr. Norris directs that a two per cent. solution of osmic acid be used in the same way, and gives an impressive photograph of the result obtained by himself by this means. A two per cent. solution of osmic acid is generally credited with the power of instantaneously fixing albuminoid bodies, and rendering them no longer subject to change. This it undoubtedly does; but to obtain the result it is necessary that the solution of osmic acid remain of the same strength, and that it be brought into immediate contact with the corpuscles. If, as may be shown by the packing method, the osmic acid becomes diluted by the serum, it ceases to exercise its peculiar fixing action on the corpuscles. Dr. Norris,

quoting in his book from a private communication of mine to him in 1879, and not from my paper, refers to an experiment with osmic acid, which I considered crucial and adverse to his views. I stated to him that, if the blood immediately on being drawn were mixed with a 2 per cent. solution of osmic acid, and if this mixture were subsequently diluted with a quantity of distilled water, so as to change the refractive index, while the corpuscles were at the same time preserved by the action of the osmic acid, the invisible corpuscle could not be found. Dr. Norris replies that he has repeated this experiment, and has arrived at an exactly opposite result; in fact, that he found 'the colorless discs present in abundance'. The question seems to be one of exactness of method; for I have again repeated the experiment more than once, arriving at the same results as at first. Care must, however, be taken and time given to enable the osmic acid to thoroughly act on *all* the corpuscles; if the mixture of blood and osmic acid be diluted too soon with water, before the osmic acid has fixed the corpuscles, invisible discs are most certainly present in abundance, and the water has the characteristic clear tint significant of dissolved hæmoglobin. In a recent experiment I placed two large drops of the 2 per cent. solution of osmic acid in a watch glass, and into this squeezed a small drop of blood, and stirred rapidly with a glass rod; from this mixture were taken, at intervals of one, ten, and twenty minutes, small drops which were run under mica covers for microscopic examination. In all, except the first specimen, the liquor sanguinis remained perfectly clear and colorless, and the corpuscles packed beautifully. Not a trace, however, of the invisible corpuscles could be found, though I sought for them most diligently. At the end of twenty minutes the mixture was diluted with a fluid drachm of pure water, with the object of changing the refractive index of the serum, after the corpuscles had been fully fixed. Careful examination of this solution failed to discover a single invisible corpuscle, even though the staining re-agents, which bring into view the discs rendered quite invisible by the action of water, were added to the solution.

Thirdly, as to the salt solution; I have already stated that, for the saturated solution of common salt recommended in the first publication of Dr. Norris's paper as the basis of the staining fluids, he has now substituted a .75 per cent. solution, stating that a solution of common salt at this strength is said 'by others' to be preservative of the blood. This is certainly an error; and I do not know on what authority it is alleged. A .75 per cent. solution of common salt is far from being preservative of the blood-corpuscles. Its destructive power is not so potent, so rapid, nor so quickly or easily demonstrated, as that of a saturated solution; but it is none the less destructive in a proportionate degree. The effect of a .75 per cent. solution of sodium chloride on the blood is as follows. The great majority of the corpuscles flatten out, the central depression becomes much deeper, so that, when seen in profile, the corpuscles are of an hour-glass shape; presently short thick projections appear on the surface of the corpuscles, and after an interval of time these curl over, and the whole corpuscle becomes a crumpled shrunken body. The effect of the solution on a minority of corpuscles is, however, different. They are quickly converted into small round bodies, the discoid and biconcave form being entirely lost, as may be easily seen by watching them roll over and over in the cur-

rents. These corpuscles are at first of a darker hue; but, on watching them closely, many among them may be seen to pale and gradually fade into complete invisibility. The number that become invisible is very much less than in a saturated solution, and to this notable weakening of the strength of the salt solution which he employs may probably be due Dr. Norris's change of opinion as to the number of invisible corpuscles normally existing in the blood; for in the publication of his paper in 1878, when saturated salt solution was the basis of his staining fluids, he declares that the blood might be said to teem and swarm with these transparent bodies (p. 6); whilst in the present volume, when a .75 per cent. solution has been substituted, the proportion of invisible to visible corpuscles is alleged to be only 1 to 60. By a number of observations made with the corpuscle-counter, and comparing the results obtained by mixing the blood with a .75 per cent. solution of sodium chloride, and the preservative 5 per cent. solution of sodium sulphate, I have arrived at the conclusion that the loss of corpuscles by the use of the former fluid is about 3 per cent., though this figure would doubtless vary with the health and age of the subject of the experiment. The corpuscles which have been rendered invisible by the action of the salt, may be recovered again for inspection by Dr. Norris's method of staining with aniline blue.

The author's ingenuity in devising methods for procuring a view of invisible corpuscles is unflinching, and he further now directs that there should be used thin flexible mica covers, instead of glass. With these, the juxtaposition of the two surfaces is so perfect that the serum filters off, and the corpuscles pack as well as under the glasses prepared for the packing method; and by this simple method of treating the blood, the invisible corpuscle becomes visible, both by impact against the colored corpuscles in the capillary currents which are established, and when lying flat in single layer. The observation of the blood under thin mica covers is very instructive, and the following is what I have observed to take place. Let a small drop of blood be placed on the edge of a very thin mica or talc cover; the blood enters in minute capillary currents, so small, indeed, that only one or two corpuscles can pass along together; in fact, except for the hard inert surfaces and the lower temperature, the conditions somewhat resemble that of the circulation in the capillaries. Closely and carefully following these currents with a 1-8th objective as they penetrate between the mica cover and the glass slide, the corpuscles are seen to follow closely on each other, swimming in what seems to be a perfectly colorless fluid. Here and there may be observed a corpuscle slightly paler than the rest; but during the first few moments, and as long as the liquor sanguinis remains colorless, not a single transparent corpuscle can be found; though it is obvious that, in watching the corpuscles defile past in single or double file, the presence of colorless bodies could be easily detected. Presently, however, the currents, as they pass forwards, are observed to become tinted; and in parts where the contact of the two surfaces is too close to allow the corpuscles to pass, the liquor sanguinis, having by this time acquired a distinct yellow tint, passes on in currents free of corpuscles. On turning now to those parts of the preparation which are situated above these currents, the corpuscles will be found in places to have packed beautifully, and here and there currents may still be seen finding their way between masses of corpuscles;

and in both of these, in the currents, and in the packed masses, the invisible corpuscles can now be found—unstable corpuscles which have parted with their hæmoglobin to the tinted serum. After numerous observations of the interesting phenomena presented under the mica cover, I can state, as a fact, that the colorless corpuscle of Dr. Norris is only found when *in the same preparation* the liquor sanguinis is tinted. In the first few moments after the blood is shed, and whilst the liquor sanguinis is yet uncolored, the transparent corpuscle cannot be found, though diligently sought for, in the minute capillary currents, where, if present, it could be detected with the greatest ease.

Dr. Norris thinks that by mixing the blood with a soluble colloid, such as albumen or gum, the hæmoglobin is prevented from escaping from the corpuscles (p. 50), and says that, if this mixture be then run under thin mica covers, the invisible corpuscle will be found to be present. On repeating this experiment, I found that, though the slower movement of the capillary currents enabled the corpuscles to be observed with greater ease, I failed to find the invisible corpuscle as long as the liquor sanguinis remained untinted, but it appeared as usual when the hæmoglobin began to be effused from the corpuscles. That Dr. Norris is still able to assert that the normal existence of invisible corpuscles is satisfactorily demonstrated by this crucial experiment, as he calls it, is remarkable. He gives a photograph (photo. 52) of blood-corpuscles from which the escape of hæmoglobin has been prevented, and in which he states 'the invisible corpuscle is present as usual'. It would be difficult for an unbiassed person to detect in it the presence of a single colorless corpuscle. On comparing this photograph with No. 7 in the same volume, in which the invisible corpuscles have been in my view developed, but in Dr. Norris's preserved, by the prolonged action of common salt, it is exceedingly difficult to understand how he can consider they represent identical conditions; in one, exosmosis of hæmoglobin has been prevented, and the invisible corpuscle is absent; in the other, solution of the hæmoglobin has been induced by the agent employed, and the invisible corpuscle has been produced in abundance. Can any one continue to doubt to what the invisible corpuscle of Dr. Norris is due?

As Dr. Norris's theory rests entirely on the demonstration of the presence of the invisible corpuscle as a normal element of the blood, and as none of the processes hitherto invented to establish this fact are free from the objection of artificially giving rise to the very appearances which they are intended to demonstrate as normal, it is impossible, at present, to accept the theory as accurate, or based on scientific and acceptable data. When dealing with bodies so fragile and unstable as the red blood-corpuscles, bodies which by all the theories of blood-formation are presumed to be in the later stage of cell-life, it must be allowed that theories, deduced from appearances seen in these unstable bodies when they are placed under abnormal conditions, ought to be accepted with great reserve.

After devoting much time and care to the study of the subject, and repeating Dr. Norris's work, the conclusion seems to me to be inevitable, that his third colorless corpuscle is artificially produced; that the ingenious methods devised by him give rise artificially to the appearance which he seeks to demonstrate as normal; that he has not sufficiently taken into account the fallacies which vitiate these

methods of research; and that his theories of the physiology of the blood, based upon the presumed existence of an invisible corpuscle circulating in the blood, are still unproven. This is the more to be regretted, because this monograph testifies to prolonged skilful and patient labour, and the numerous photographs are taken with unusual skill. I could heartily have wished that it had been possible to confirm Dr. Norris's conclusions, and to accept his interpretations; but the facts seem to me to be at every point in opposition to his views.

Alice M. Hart.

LANNELONGUE AND COMBY ON PROLONGED OSTEOMYELITIS.

THE accumulated labours of thirty years on phlegmonous periostitis, M. Lannelongue's recent paper, and the important discussions initiated by him at the Academy of Medicine and the Surgical Society of Paris, have thrown much light on this serious disease. It is now known that the element of the first attack 'is the medullary cell, which, under the influence of irritation, regains the osteogenetic qualities possessed by it during embryonic life'. It proliferates abundantly, produces new bone and pus; and that series of disorders is seen to be developed, which, from the apparently very limited subperiosteal abscess, leads us gradually to the formidable symptoms of osteomyelitis with diffused phlegmon of the whole of a limb. The distant results of osteomyelitis, however, are not known, or imperfectly known. Death or recovery, it was said, occur after more or less prolonged suppuration and the expulsion of a sequestrum. That was all. No one had kept the patients in view, and no one had written the detailed history of the new affections which might attack a bone, predisposed by a first attack, and of which the form, the size, and the supply of blood have been profoundly modified by this serious inflammation. When, some months or some years after the cure of osteomyelitis, an affection of the bone supervened in the limb before attacked, it was called scrofulous or syphilitic necrosis or caries. It was a new and independent disease; and the close connection between the symptoms which had to be fought against, and the deeply seated disturbances and the old lesions, vestiges of the forgotten osteomyelitis, was not recognised. All, however, did not fall into this error. M. Verneuil pointed out the connection, and M. Gosselin, in the article on 'Osteitis', in Jaccoud's *Dictionary*, says that the epiphyseal osteitis of adolescence is the most frequent cause of necroses of spontaneous origin. In a recent discussion at the Société de Chirurgie, M. Trélat cited the case of a man whose thigh he had disarticulated for a chronic osseous affection, which had been in process of evolution for more than forty years, and of which the origin was suppurative osteomyelitis. Finally, here and there, cases are met with in which phlegmonous periostitis is pointed out, perhaps intentionally, in the antecedents of patients suffering from osseous necrosis. But, before the time of M. Lannelongue and his pupil, M. Comby, these ideas were by no means common. They were the first, in a remarkable paper on which this analysis is founded, to establish the relations of cause and effect, which frequently connect osteomyelitis with a series of affections of bone, which were supposed to be all but independent. They have shown that certain

chronic conditions, certain hyperostoses, contain deep bony abscesses, some inexhaustible fistulae. Some more or less extensive necroses were the legacy of an old acute osteoperiostitis, of which a rigorous investigation discovered the traces in the antecedents of the patient. Hence the name of chronic or prolonged osteomyelitis, given to these accidents by the authors.

Hyperostoses are the rule in osteomyelitis. On the boundaries of the suppurating foci, the irritation of the young cells of the periosteum, of the Haversian canals, and of the medullary canal, induce a more or less abundant proliferation. The elements are soon organised into bony tissue, and thus arise those new productions of variable form and size, tuberosities, spicula, stalactites, patches, grooves, true cylinders sheathing all or part of the old bone, which may become greatly enlarged. The Haversian canals, and the central medullary canal, are obliterated by the superadded layers of bony substance. When these hyperostoses are co-existent with acute phenomena, their origin, even when some time has elapsed, cannot be mistaken; but, if they only appear later on, it is no longer so. At certain points of the bone, there may remain some cause of irritation—a partially destroyed focus. New attacks may supervene, not sufficiently intense to produce a true inflammation, but sufficient to quicken cellular proliferation; and by degrees the bone becomes thicker. This has been attributed to syphilis, scrofula, and ordinary injuries; but attentive examination would reveal the true cause, former osteomyelitis.

MM. Lannelongue and Comby publish in their paper thirteen cases which have come under their observation, or which they have collected from other writers, and which show the presence of hyperostoses, as well in the flat and short bones as in the long bones. The primary disease was sometimes of from ten to twenty years' standing. In one case, acute osteomyelitis had made its appearance at the age of eight; extensive suppuration carried off the patient. Projections and protuberances were found on the bone; its circumference was 15 millimètres (nearly 6 inches), its curve was effaced, and its length exceeded that of the opposite femur by $4\frac{1}{2}$ centimètres (1.75 inches).

It is doubtful whether the preparations given to the Dupuytren Museum, by M. Lherminier, are connected with prolonged osteomyelitis. They represent hyperostosis of the tibia and fibula following ulcers of the leg, which rendered amputation necessary. In some of these bones, the hyperostoses are so slight, and the deformity so slightly marked, that the ulcer must clearly have been the lesion which necessitated removal of the limb. It has also been shown that ulcers may be the primary cause of a considerable thickening of certain bones. The tibia and the fibula increase threefold in size, the muscles become atrophied, the vessels and nerves are sheathed in bony grooves, and the aponeuroses of the limbs bristle with eburnated needles and stalactites.

Minute analysis of these cases proves that the loss of the substance of the integuments was primary; the peripheral irritation had propagated itself as far as the bones, and had induced hyperostosis. The same thing occurred in M. Lherminier's preparations; the most that could be said of them was that these exuberant osseous productions, once accumulated, had distended the skin and added a new cause to the former causes of ulceration. But it remains none the less established, in the opinion of some French authorities, that in these cases the ulcer was

the primary lesion. However that may be, M. Lannelongue's observations remain valid, and when, at any age much after adolescence, hyperostosis, accompanied sometimes by lengthening of the limb, by ankylosis, arthritis, chronic hyarthrosis, or some muscular atrophy, is found, inquiry must be made whether, in reality, it is not a case of prolonged osteomyelitis. It would not in this way be rare to find a thickening, a kind of swelling of the soft parts, hypertrophy of the hair, adhesions to the deep tissues; the integuments are of a higher temperature than those on the opposite side; the veins are dilated, and the pains are frequent. Acute attacks supervene, an abscess is formed, then a fistula leading to a denuded point of bone. These repeated attacks of osteitis were well known, but their origin has remained unknown for a long time.

Since Sir Benjamin Brodie's classic description has been popularised in France by Broca's labours, bone-abscess has been recognised. M. Cruveilhier has published an interesting thesis on this subject, which M. Golay has recently taken up and illustrated by fresh facts. It is known that these abscesses become developed not far from the articular cartilages, whether in the epiphysis or in the diaphysis, and that they are characterised by painful attacks, which break out with great violence, sometimes at long intervals. Sometimes there is present, at the level of the purulent collection, a thickening of the periosteum, or even a true hyperostosis. A permanently painful point, also, reveals the existence of a deep cavity. And it is there, sometimes, that a spontaneous opening takes place, by which the pus escapes. It is also known that the cavity does not always contain pus. M. Cruveilhier has seen, in one case, a yellowish liquid. The aluminous periostitis of Ollier and Antonin Poncet might only have been an abscess transformed by a sort of special absorption. Sometimes, even, there is no liquid at all, the pyogenic membrane and its granulations alone exist. M. Duplay, at the Saint-Louis Hospital, has been seen to open up, with the chisel and the gouge, two galleries hollowed in the diaphysis of a tibia, and lined with a granular tissue. There was not a drop of pus. Finally, since Gosselin's time, false abscess of neuralgic form—osteoneuralgia—has been described. Deceived by hyperostosis and attacks of pain, the surgeon believes in the presence of a purulent cavity, and the trephine only reaches a condensed mass of bony trabeculae.

The observations of MM. Lannelongue and Comby prove that all these varieties may only be forms of prolonged osteomyelitis. As a consequence of this disease, in fact, the bone is not normal; it is irregular, honeycombed into cavities, bristling with projections; its relations are changed; its form, consistence, and structure render it more or less unfit to fulfil the functions of leverage and support. Its circulation is badly carried on, ill-defined and the irregularity of the supply of blood 'accounts for the congestive outbreaks and the incessant inflammations which make the disease interminably long'. Facts, also, leave no doubt of the osteomyelitic origin of some of these abscesses. M. Broca's case is as clear as possible. His patient had had, at eighteen years of age, at the lower end of the humerus, an osteomyelitis mistaken for typhoid fever. Sixteen years afterwards, he had paroxysmal pains, which gradually became intolerable. Trephining was done at the level of the most painful point; pus escaped; the focus was two centimètres long, half a centimètre wide, and lined with a very sensitive

membrane. M. Perdrigeon's case is equally definite. At twelve years of age, the patient had had osteomyelitis; at fifty-six years of age, after numerous outbreaks in the left femur, he died. In the bone previously attacked, a large anfractuous focus, ten centimètres long and three wide, and lined with a fungous membrane, was found. In M. Trélat's wards, at the Necker Hospital, there is, or was recently, a patient, aged forty-three, who suffered, in his childhood, from osteomyelitis of both legs. After many years, he came into hospital, for the first time, for violent pains of the lower end of the left tibia. The trephine was used, and the surgeon opened a large cavity filled with pus. This year there was a fresh outbreak, but at the lower extremity of the right femur. M. Trélat trephined again, and this time found a mass of granulations. This case is remarkable, for it shows, in the same individual, the two principal varieties of cavities which may be hollowed out in a bone by prolonged osteomyelitis.

Although more frequently recognised at the present day, these abscesses are of rare occurrence. It is not so with another change, namely necrosis, which attacks the long bones specially, but is also found in flat bones and short bones. Its history is always the same. The patient says that for a long time past he has suffered at intervals; there is pain in the bones; the adjacent tissues sometimes become inflamed, an abscess opens, a fistula is set up, and the probe, introduced into the opening, shows the existence of a denuded bone, which, in certain cases, is movable. But when it is desired to ascertain the origin of the necrosis, mistakes are constant. Should the patient be pale and emaciated, have some swollen gland, or have had some cutaneous eruption in his youth, scrofula is inferred. If this etiology cannot be accepted, syphilis or injury are pressed into the service, and no attempt is made to discover whether, ten to twenty years ago, there has not been some acute outbreak of osteomyelitis. It is only when the chronic form has followed immediately on the acute form, when there has been no apparent cure, that the etiological diagnosis is made. Very remarkable cases of necrosis, consecutive on prolonged osteomyelitis, have been noted. In Professor Verneuil's practice, at the Pitié Hospital, there was the case of a lad, who had a fistula about the two malleoli of the right leg. A probe came on denuded bony points; there was no movable sequestrum. It was ascertained that the patient had had osteomyelitis, the symptoms attending which were so serious that amputation had been proposed. However, the lesions appeared limited, and it was thought that a limited scooping-out would suffice. The patient was anaesthetised, and Esmarch's bandage applied. An incision of five centimètres (two inches) in length was made on the fibula. The external malleolus was emptied, and the joint kept intact; but in an upward direction the lesions were more serious than was suspected. The incision was enlarged to 10 centimètres, and yet the limits of the evil were not arrived at. The entire fibula was of necessity removed; there only remained the intact groove of the thickened periosteum. The tibia was then dealt with. The changes there, also, were very extensive. The malleolus and 15 centimètres of the bone were extirpated. The leg, thus deprived of all bony framework throughout more than its inferior third, was placed in a solid plaster splint. At the end of five months cure was obtained, with a shortening of the limb to the extent of 7 centimètres only.

M. Paul Réclus also gives, in the *Gaz. Hebdomadaire de Méd. et de Chir.* for Jan. 27, a case of a patient in the Hôtel-Dieu. There was long standing osteomyelitis, with two fistulae in the upper third of the right humerus. The bone was denuded. Esmarch's bandage was applied, and, by thermo-cautery, an incision was made from the acromion to the middle of the diaphysis. A thick lamina of fresh bone was found, and openings here and there through which the sequestrum was visible. With the chisel and hammer, the intermediate bridges of bone were removed. The new bone represented two-thirds of a cylinder lined with fleshy growths, on which rested the whole upper end of the eroded humerus. It was extracted and removed piecemeal; the bony groove was carefully scraped, the head of the humerus thoroughly emptied, and a dressing of iodoformised wadding was applied. The results were excellent. The enormous breach was filled up, and the new bone, which had been carefully preserved, formed a framework which appeared to be very solid. The shoulder-joint was healthy, and allowed extended movements.

These examples might be multiplied. M. Lannelongue's memoir, which is the basis of this article, contains some cases of a very remarkable character. M. Paul Réclus, however, from whose *résumé* this description is taken, has preferred quoting unpublished cases. MM. Lannelongue and Comby's facts prove that, in presence of a bony lesion, hyperostosis, central abscess, fistula, or necrosis, whatever may be its standing, or how spontaneous soever the lesion may appear to be, we should always endeavour to ascertain if there have not been previously an osteomyelitis—the real cause of the condition.

REPORT ON ANTISEPTIC SURGERY IN GERMANY.

FOREMOST in publishing results of new methods tried is the clinic of Professor Esmarch in Kiel, and we find a long article 'On the Use of Iodoform and Turf Dressings', by Dr. G. Neuber, in Langenbeck's *Archiv*, 1882, Band xxvii, the observations for which were made under Esmarch's own superintendence. The report says that, after the German Surgical Congress in 1881 was held, it was thought time to give iodoform dressing a trial; it was accordingly used for abscesses, whitlows, boils, suppurating glands, etc., the opened cavity being filled with iodoform, and covered with a pad of carbolised jute, which was sometimes left until the whole wound had healed, and was only exceptionally removed. The results of the use of iodoform in tubercular granulation processes were watched with great anxiety, inasmuch as very good results had been previously obtained by the use of Listerian permanent dressing. In fact, the list of resections reported on a former occasion by the same author in the *Archiv*, Band xxvi, Heft 1, p. 106, was one which, for brilliant results, has never been surpassed. Out of thirty-four resections of joints, thirty-one were cured, all of which had had a dressing, which was at the least sixteen days, at the most thirty-five days *in situ*, and was only once applied. In testing the efficacy of the iodoform dressing, all the most difficult cases to treat were reserved for it. The patients were all scrofulous, and had affections of the bones, joints, and soft parts. In each case, after incisions had been made, the granulations were well scraped out with the sharp spoon, and the cavity stuffed, rubbed, or powdered

with iodoform, and covered with a dressing of the same. The results were not at all brilliant. Of twenty-one cases, there were only thirteen cured, and these only after several months in hospital. Five had fistulæ, one had amputation done afterwards, one patient was still under treatment, and one died, after excision of the hip, of tubercular meningitis. This method is, therefore, neither quick nor radical, and does not protect the patient from relapse. The principal advantages it possesses over carbolic dressings are, that the iodoform is less irritating to the wound, is less volatile, and is absorbed less rapidly than carbolic acid.

Billroth's method of dressing with iodoform is as follows. The wound is powdered thinly with the drug, or filled with it, then a layer of cotton-wool with powdered iodoform on it follows, or a piece of iodoform gauze; then around this a sufficient quantity of wool, perfectly free from fat, a water-tight material; lastly, the bandages fixing and compressing the whole. These are changed from the second to the fourth day; later on, every five to eight days, though some dressing, according to Mikulicz, is left on longer.

The method adopted, according to Neuber, consists of sprinkling the wound with, at the most, 3 grammes (45 grains) of iodoform; puncture of the skin, or insertion of absorbable drainage-tubes; catgut sutures; placing in position of a small turf pad, with 2 per cent. iodoform on it, and of a larger one with nothing on it; fastening of the whole with a gauze or water-glass bandage; changing of the whole every twelve to forty days. The difference between the methods is merely the substitution of India-rubber drainage-tubes for the absorbable ones used at Kiel.

Gussenbauer gives an exact account of treatment with iodoform in tuberculosis of bone in the *Prager Med. Woch.*, 1881, No. 35. There were twenty-eight cases, of which fourteen were complete successes, whilst fourteen others were not completely cured, four cases altogether having had only one dressing, whilst others had one several times, even as many as nine.

Neuber says that, had the toxic characters of the drug been better known, and their development by contact with fresh wounds been understood before it was generally used, the sad accidents which have been recorded would have never been reported. In dressing mucous cavities, the best results have been obtained, the only drawback being the said poisonous effects, which were prone to develop rather quickly in these cases. Two deaths had to be reported in this division from iodoform poisoning alone. The symptoms of intoxication are much the same as those reported by Schede, Küster, etc., described in the *LONDON MEDICAL RECORD* for May 1882. The places in which most caution is necessary are the larynx, œsophagus, mouth, nose, and pharynx, as resorption from these localities is rapid, through contact with food, etc. An iodoform crystal was found in a branch of one of the bronchi in one case which collapsed.

In applying iodoform to the ordinary cases in which carbolic acid had hitherto been used, it was found that, under one dressing carried out with jute and gauze impregnated with iodoform dissolved in ether and alcohol in the strength of 10 per cent., and drawn through a wringing machine, twenty-four cases healed completely, twenty-two healed up to a few fistulæ and superficial granulations, which subsequently disappeared, whilst eight required several dressings, and two died. These results, however,

were not much better than previous ones; but iodoform has the advantage in being cheaper than the more elaborate carbolic dressing, the preparation of dressings is much simpler, and it has been already mentioned as being less volatile than carbolic acid. But iodoform should not be used in larger quantities than 4 grammes, and the 5 and 10 per cent. gauze jute and cotton-wool is much to be preferred to the carbolic acid preparations.

Now follows a most interesting report on a new dressing material, which was quite accidentally discovered by Neuber in the summer two years ago. A labourer one day appeared in the clinic, who had sustained a complicated fracture of both bones of the forearm eight or ten days previously, whilst working on a moor; the soft parts being extensively lacerated, and the wrist-joint opened. The man at once got a comrade to surround the fracture, as well as the whole forearm, with a thick paste of turf-mould, on which was then laid a sort of rough splint of wood. With this primitive dressing, he came to the clinic ten days afterwards, and, on being questioned, said he was very well otherwise. Numerous washings in a hand-bath at length freed the arm of all the turf, when it was found that the wound was healing beautifully, and had not a sign of suppuration, the surroundings being without any reaction. Some parts of the wound had united by first intention, others were granulating nicely. On the application of a Listerian dressing and fixation in a better position, the fracture and wound healed readily. The idea that in turf-mould another good antiseptic dressing might be found then struck Neuber, and he accordingly proceeded to have analyses and investigations made, the results of which showed that the dust resulting from the manufacture of sods of turf by the circular saw, as carried on in Schleswig-Holstein, and which is very light in weight, as well as in colour, possesses a powerful affinity for ammonia, carbonate of ammonia, and had smelling materials generally, and takes up nine times its own weight of water. In the infantry barracks at Brunswick such turf-mould is used as a deodoriser in the privies, and renders faecal products absolutely innocuous. A series of experiments on its use in the dressing of wounds having been carefully carried out, the turf-mould is now used in the following manner, which has been very successful. Bags of gauze wrung out in 5 per cent. carbolic solution are prepared of two sizes, 12 and 24 square centimètres respectively. These are filled with turf-mould (or dust), the smaller bag with mould containing 2½ per cent. of iodoform, which is laid on the wound directly it has been disinfected with either carbolic solution (2½ per cent.), zinc chloride (8 per cent.), or, at most, 3 grammes of iodoform. Over this is laid the larger bag, the mould in which is saturated with 5 per cent. carbolic solution. The whole is kept in place by a gauze bandage. As these exercise a very energetic pressure upon the wound and its surroundings, it has been found unnecessary to use the elastic compressive bandages hitherto in vogue, unless in the case of wounds near the openings of the body. In Esmarch's clinic, it has never been found necessary to remove this dressing for secondary hæmorrhage, even though the bloodless method is often adopted; and it is the rule to apply a permanent compressive dressing before undoing the tubing above the wound, the only other precautions necessary being that the limb should be elevated, and all ligatures applied before closing the opening. In all, there were treated in this manner,

from September to the end of November 1881, fifty-five wounds on fifty-three patients; the list comprising seven resections and osteotomies, seven scrapings out of carious bones and joints, five amputations, twelve extirpations of tumours, six removals of sequestra, five abscesses, thirteen various wounds, amongst which were seven nerve-stretchings and two herniotomies. There was no fatal case, except one after nerve-stretching for *tabes dorsalis*, said to be due to pyæmia after disease of the prostate and abscess of the bladder; but such a case should hardly have been operated upon. No diseases of wounds were observed. Thirty-one cases were without fever; septic fever occurred eleven times, slight inflammatory disturbance only six times, elevation of temperature four times. In fifty cases, the first dressing remained on until the end of the time intended, mostly a fortnight, or more; and in only five was it necessary to remove it before that time had elapsed. Turf prepared according to Neuber's directions may be obtained from the Torfbereitung's Fabrik in Ultersen, Schleswig-Holstein; and the cost of a turf dressing amounts to 1.80 marks, whereas a carbolic acid Listerian dressing costs upwards of 15.08 marks, if we take an amputation of the thigh as a standard, for which, at least, six complete dressings are required at 2.44 marks; hence turf dressings are eight and one-third times as cheap as these.

Summed up, the advantages of turf dressing are these. 1. A given quantity of the mould takes up more fluid than jute, gauze, or cotton-wool. If it be slightly moistened, its absorbent power is still further increased; wounds remain perfectly dry under it. 2. It possesses a great power of absorbing products of decomposition of organic substances, and hence prevents the same from occurring, and acts even in the unprepared form. Further experiments are being made in this direction. 3. The moistened mould is a very soft but still elastic substance, so that it is easily placed in the required position in the bags before applying them to the inequalities of the body. 4. It is the cheapest of known antiseptic dressings, one pennyworth sufficing for a dressing, and will be more so when it is found that the preparation with some antiseptic can be left out. 5. It makes a very suitable pad for all purposes when enclosed in gauze.

Neuber has further, since the date of his first essay, treated seventy-eight wounds with this dressing, that is, up to February 1882, and much the same class of cases, with the addition of ovariectomy, hysterotomy, and operation for floating kidney, one case of each. Of all these, only three died, namely, one from tetanus, one from delirium tremens and sepsis, one from gangrene of the leg and sepsis after resection of the knee on account of hæmophilian inflammation thereof. Altogether, therefore, 133 cases have been hitherto so dressed. The dressing remained from ten days to six weeks in 122 cases, and had to be changed only in eight. In 85 per cent. of the cases the wound was entirely healed on the removal of the dressing. The remaining 15 per cent. have since been healed or are under treatment. Glass splints are almost exclusively used in this clinic, and have been found to answer all requirements.

Schmid, in the *Centralbl. für Chir.*, Band ix, Heft 1, p. 3, 1882, reports on the use of salicylic acid in removal of sequestra, etc., at the Augusta Hospital in Berlin. He finds that there was no disturbance of the healing process in the wound; that no fever appeared; and that the secretions of the

wound never decomposed. In removals of sequestra, the cavity was packed full of powder (salicylic acid), and over it was placed salicylic wadding. The first dressing remained on an average eight to fourteen days in position, and the decomposition which might take place in the outer layers of the dressing had no influence on the wound itself. Compared with iodoform, this dressing seems to have similar advantages; but the author is strong in his belief in the specificity of iodoform against tubercular processes. Though 40 grammes were often put on wounds, no salicylic intoxication showed itself. The amount of secretion is greater than in iodoform dressing; but, altogether, nothing showed the latter to be superior to salicylic acid. With the exception, however, of Neuber's work just quoted, no result seems as yet to have been definitely arrived at by these different authors, whose evidence on all sides is very conflicting. It will be certainly safest to use not more than 4 grammes of iodoform for any purpose until we know more about it.

Hahn (*Berl. Klin. Woch.*, No. 24, 1882) reports seven cases of vaginal extirpation of the uterus, one of which ended fatally, and, as he believes, solely because he adopted drainage in it. His method sometimes consists in closing the peritoneal opening after removing the uterus, and then, without drainage of any kind, which is sure to promote peritonitis, filling the well-disinfected vagina with about four or five teaspoonfuls of iodoform, and packing it with gauze of the same nature. In other cases, Hahn leaves the opening patent, ligatures everything lateral *en masse*, and places, after due disinfection with 0.3 per cent. salicylic solution, a teaspoonful of iodoform at the very end of the cavity, so that the intestine is seen through the speculum to be lightly powdered with it, and then dusts four other spoonfuls along the vagina, closing it with a piece of iodoform gauze. This was done in carcinoma, and the dressing had to be changed after twenty-four hours, the vagina being irrigated with luke-warm salicylic solution, which usually brought out most of the iodoform.

In the German Surgical Congress, held at Berlin from 31st May to June 3rd, 1882, the subjects of antiseptics was introduced by Kümmell of Hamburg, who believes, that in using solution of corrosive sublimate, he has now achieved successes which will put iodoform in the background altogether. He uses a solution of 1 in 2,000, wadding saturated with 0.5 per cent. of sublimate, ligatures of silk boiled in 1 per cent. solution, catgut preserved in the same for twenty-four hours; and, as a powder dressing, he uses glass powder disinfected by the addition of solution of the sublimate. Cheaper than this, Kümmell says, is the use of quartz, screened through a fine sieve and burned. It is forced out of the wound by the granulations, and no grains of sand ever became incarcerated; but, to prevent this, he uses charpie made of glass-wool, which also makes the best material for drainage. At the same meeting, nearly every known substance was advanced, and held to be the correct one; for instance, acetate of alumina, sand, ashes of all kinds, saw-dust, charcoal, etc.; but the result is that any substance will act as an absorbent. It is only necessary to carry out the primary antiseptics correctly, to operate rapidly, and to leave the dressing undisturbed for as long a period as possible.

F. WILLIAM ELSNER.

VON NUSSBAUM ON THE VALUE AND
DANGER OF ANTISEPTICS;
WITH REMARKS UPON THEIR USE IN MILITARY
SURGERY.

IN an address delivered before the Medical Union in Munich, in April last, Professor von Nussbaum brought forward the question of the relative value, and at the same time the relative dangers, of the various antiseptic remedies that have hitherto been employed in surgery, and, passing each in review, placed before his audience a most valuable summary of their respective properties, gathered from his own experience and from that of contemporary authorities.

Commencing with a terrible reminiscence of the state of things prevailing in certain hospitals before the employment of antiseptic treatment, he showed, by reference to the figures of the Town Hospital in Munich, how the introduction of that system had at once reduced the mortality by one-half, and almost limited the death-lists to cases of old age, accident, or constitutional disease, such as tubercle or cancer, and how the period of convalescence after operation had been shortened to almost an equal extent.

'At first,' he said, 'I confined myself as strictly as possible to the use of Lister's carbolic dressing, and, even to the present time, have operated and applied dressings under the spray, notwithstanding the fact that many authorities regard it as superfluous. I have done this partly from a feeling of loyalty, since we owe the whole movement to Lister's dressing, and partly because all other modifications did not profess to do more, but, by their most ardent admirers, could only be said to be "very nearly as good as Lister's". Only after a considerable interval did I begin to make use of other antiseptic remedies, and then it was for the purpose of demonstrating to my pupils all the methods which had obtained repute; besides which, I considered that I ought to make myself familiar with all the antiseptic remedies in use, since one never can tell but that in time of war, or even of peace, one may find oneself in circumstances where the use of one or another antiseptic alone is available, and all the antiseptics in use can at least ward off the dreaded fatalities of former years, although the true Listerian method be superior to every one of them. Everything in the world, however, has two sides, and nothing is wholly free from fault, and hence even the Listerian dressing has its shady side.'

The necessity for extreme attention to all its details, without which its remarkable results cannot be attained; its cost, its inapplicability in wounds communicating with the natural apertures of the body; and, lastly, the susceptibility of certain skins to the irritative action of the gauze, were each in turn considered.

With regard to the latter, the name of carbolic eczema is wrongly applied to the affection produced, since the true irritant is the resin or paraffin with which the gauze is prepared, and no remedy for the evil can be of much service until the use of the gauze is omitted, and some other antiseptic substituted. The most serious drawback of all, the carbolic acid poisoning, was discussed at greater length.

'Carbolic acid is, indeed, a poison, and from my point of view every antiseptic, in certain doses, must be regarded as poisonous; for it is hardly conceivable that any drug can exist which, possessing the power of destroying or rendering functionless the

microscopic organisms which produce putrefaction, can at the same time be perfectly harmless towards the human organism. I do not number myself amongst those who believe in the existence of a special idiosyncrasy against carbolic acid.'

Various degrees of intensity of carbolic acid poisoning may be assumed; and these, being purely arbitrary, may vary in number according to individual experience. Three degrees, however, may easily be distinguished. 1. A very slight carbolism characterised by greenish urine, gastric symptoms, and weakening of the power of the heart and lung. This form, if no further carbolic acid be employed, tends rapidly to recovery. 2. Carbolism, usually after prolonged use of the acid, by which the circulatory and respiratory powers are depressed, anorexia, nausea, salivation, and singing in the ears are produced, and an apathetic state is entered which threatens collapse. In all degrees of carbolism, a certain amount of renal irritation is manifest, but the occurrence of dark urine is more marked when absorption has taken place through the skin, than when the drug is administered internally. The worst form of carbolism is that which is characterised by the sudden onset of a cold, clammy sweat, followed by a theadry and running pulse, and laboured shallow breathing; although consciousness remains, the end is always fatal. Injections of camphor, of atropia, or of sodic sulphate are useless; paralysis of the respiratory centres quickly follows, the heart usually continuing to beat for a short time after respiration has ceased. To these acute forms of carbolic acid poisoning must be added the chronic carbolism which occurs by its cumulative action, and is of great importance.

This liability to the toxic effects of the drug is probably the principal cause which has led to the search for substitutes for it. Of those which have been tried, some have met with very little support. Corrosive sublimate, for instance, has been but little used, and its tendency to produce hæmorrhage from the intestinal tract, even after external application, renders it too uncertain for use in large quantity. Benzoic acid, too, has made but little stir; acetate of alumina and thymol have found more supporters. The most important experiments, however, are those which have been made with chloride of zinc, and with boracic and salicylic acids. All three drugs have been employed, and their value demonstrated, by Lister himself, and the boracic acid has won from him especial praise for its power of checking pain, and of retaining its antiseptic action for a long time. It is especially useful in dressing wounds about the mouth, nose, and anus.

An especially prominent position must be reserved for the chloride of zinc, which possesses the most useful property of rendering antiseptic a wound which has already become septic. A solution of 8 per cent. strength often does most valuable service in this way, and cannot be too highly prized, its action being much more energetic than that of a 5 per cent. solution of carbolic acid. It is, however, more painful. In addition to these qualities, it has an useful effect in checking parenchymatous hæmorrhage after operations, without exerting any actual caustic powers, and has found great favour with Professor Bardeleben, as a dressing for recent operation wounds. The results obtained, taken together with the far greater simplicity and cheapness of its use, bring it into close competition with the genuine Listerian dressing.

Salicylic acid, again, deserves thorough recogni-

tion. It is especially valuable where dressings are required to last for a long time, its slow solubility and stability allowing it to remain antiseptic for a considerable period. The ultimate results of its use are very similar to those obtained by the Listerian method, but the length of time required to obtain these results is less satisfactory, the chief drawback being the feeble absorbent action of the salicylic lint. Rapid absorption of purulent secretions is an useful property in any form of dressing, and this property is possessed to a marked degree by Lister's gauze.

The practice of powdering open wounds or ulcers with salicylic acid, in a state of very fine division, has been lately introduced; and it is alleged that primary union is not thereby interfered with, the surface is not irritated, but is protected by an excellent and lasting antiseptic. 'By this method,' said Professor Nussbaum, 'I have obtained some surprisingly brilliant results. Severe compound fractures, in which I have had to lay bare the bones, I have then proceeded to fill up with salicylic acid powder, and they have again and again made a good and rapid recovery without a rise of temperature; one point, however, I certainly dare not assert, and that is, that primary union is never hindered by this treatment; for, in delicate tissues, as, for instance, the muscular tissues in children, I believe I have almost always produced formation of scabs, and often a very decided supuration.'

'It has appeared to me also that, in cases where a large absorbing surface has been so treated, as, for instance, after removal of a cancerous breast, an unmistakably bad influence was exerted upon the constitutional state, so that I felt obliged to make an exception of the delicate tissues from those upon which I had had reason to praise its action so highly. Altogether there are, however, many valuable points in this method, and I shall take occasion further to point out the usefulness of its lasting antiseptic action when employed in military surgery.'

The most recent of antiseptic remedies of repute, viz., iodoform, deserves careful discussion, since results have been obtained by it which even the Listerian dressing cannot excel, and which have been obtained, further, in cases to which the latter is either inapplicable or unsatisfactory. In such cases, iodoform must be looked upon rather as auxiliary to, than rivalling the original method. One of its chief drawbacks is, however, its unpleasant odour; and to overcome this various deodorisers may be used, Tonquin bean, ethereal oils, etc. Being absorbed by skin, serous membranes, or subcutaneous tissues, it forms salts with the alkalies of the blood, which are, for the most part, quickly thrown off by the kidneys. It renders wounds painless and aseptic, its action in that respect being slow, but of long continuance. This slowness prevents its being of value in the rapid disinfection that is required for instruments, hands, etc. It is best used in the crystalline form as a coarse powder, being then less rapidly absorbed if used in large quantities for open wounds. Mosetig fixes the maximum dose at 60 grammes; but Professor Billroth and others who have used it freely have not scrupled to put 100 or even 200 grammes of iodoform powder into a fresh operation wound. Of late, however, much smaller quantities have proved equally effective.

Iodoform gauze, made by simply sprinkling iodoform on ordinary gauze, or the so-called Bruns' gauze (made with 4 parts of resin, 1 of glycerine, and

20 of rectified spirit), impregnated with 30 to 50 per cent. of iodoform, is now largely employed. Bougies of graduated strength, and solutions for injection, are prepared; but the use of the powder and of the gauze is the most universal. It is especially in cases of severe bruising or crushing of tissues, as in machinery accidents, that its value as a conservative power is seen, many amputations being saved by its prompt employment. The results that now follow operations upon the mouth, nose, vagina, rectum, etc., where iodoform is employed, contrast most favourably with those of former days, when continued suppuration and foul discharges led to numerous secondary affections, such as phlegmonous erysipelas, etc., not unfrequently with a fatal result. The operation of removal of the tongue for cancer was formerly attended by a mortality of from 40 to 50 per cent., which is now reduced to, at the utmost, 12 per cent.

Attempts have been made of late to prove that iodoform possesses a power of checking the progress of tubercular disease in general, and especially its local manifestations in the testis and the joints. This, however, requires further confirmation. Like the other antiseptic drugs, iodoform has its dangers. 'There is no powerfully acting remedy that may not, under certain conditions, be found to be possessed of unseen and dangerous properties; the lordly carbolic acid can destroy health and even life, because it may occasionally act rapidly; iodoform is an antiseptic acting much more slowly, but it is far more dangerous than carbolic acid. With a little practice and attention the use of the latter may be freed from danger, but it is far otherwise with iodoform. Hardly had its use become general in the clinical wards of the civilised world, when one heard on all sides of shocking accidents, and of genuine cases of poisoning.'

A series of such cases was collected and published by Professor Koenig, and immediately an anomaly presented itself, viz., that, whereas in many cases a few grammes of iodoform caused serious results, Professors Mosetig and Billroth were using as much as from 60 to 150 grammes with impunity. To explain this, the purity of the drug employed has been called in question, and the suggestion thrown out that the age of the patients affected might afford a clue. Neither of these explanations is satisfactory. More probable is the view that, in the presence of feeble heart-muscle or of kidney-disease, the separation of iodine by the kidneys is hampered, and its poisonous action exerted upon the blood. Mosetig, who first introduced the remedy, and who has used it in a very large number of cases without a single case of poisoning, believes that the key to the riddle may be found in the practice adopted by many surgeons of using carbolic acid, either as spray or lotion, at the same time as the iodoform dressing, the irritant effect of the acid upon the kidneys rendering them less able to carry on the due excretion of iodine. Cases have not unfrequently appeared, however, in which erysipelas has intervened in tissues dressed by iodoform alone; and therefore it would seem that the generally used combination of the two methods offers the best chances of success, due regard being always paid to the depressing effects of carbolic acid upon the heart and respiration.

It is probable, however, that we have not yet arrived at the true method of employing iodoform so as to obtain its best qualities, and to minimise its risks, and no pains or opportunities should be spared

by which to arrive at such conclusion. Of the dangers which beset its use the broad facts are now well known, and caution will always be observed in employing large doses, in using carbolic acid simultaneously, or in treating the subjects of fatty degeneration. Much more, however, remains yet to be learnt.

'Upon military surgery iodoform flashes like the first rays of the rising sun, and supplies exactly that want which has been long and earnestly felt. We know that our wounded soldiers, when once they have arrived at the field hospital or base hospital, will receive all that science, art, affection, or gratitude can suggest, but for them the worst and most dangerous stage is that which must elapse during their transit from the battle-field to the field hospital. Terrible, indeed, are these minutes, often extended to long weary hours, till help arrives to remove the helpless wounded from the spot where they have fallen. I am well assured that the most energetic efforts of the best sanitary officers must be incompetent to relieve all the terrors of this period; but, since the means of immediate treatment must be limited, especially where a large number of wounded have to be dealt with simultaneously, the immense value of a drug which can be immediately applied, and which will render wounds aseptic and cleanly until time has enabled the wounded to reach the hospital, cannot be overrated. During the Russian and Turkish war, von Reyman and Reyher showed most encouraging examples of the value of plugging wounds on the battle-field by antiseptic tampons. Five or six days of the roughest transport did not prevent the wounds so treated from appearing fresh and aseptic on arrival in hospital. Such results lend support to Esmarch's brilliant idea, to provide every soldier with the means of rendering his wounds antiseptic. With the great propelling powers of modern weapons, many gunshot wounds have all the characteristics of incised wounds, and of themselves become rapidly closed to the exclusion of septic matters. If, in our next war, we are provided on the battle-field with tampons of iodoform, or of iodoform with salicylic or boracic acids, I feel perfectly convinced that a large number of wounds will be found to be healed in the course of a few days; that all others will be placed in far more favourable conditions; and that, in many cases, it will be possible to send the wounded away at once to a distance, or even to their own homes, where they will no longer have to contend with the hardships and horrors of war, but will be nursed with the gratitude and affection that they so well deserve.'

E. CLIFFORD BEALE.

SHEARER AND OTHERS ON THE OPIUM QUESTION.

At the last quarterly general meeting of the British Medical Temperance Association, a paper was read by Dr. G. Shearer of Liverpool, on 'Recent Apologists for the Opium Trade'. In the course of this paper he refers to the opinion of Dr. Kane, and quotes him as follows:—'Viewed from any standpoint, the practice is filthy and disgusting; is a reef that is bound to sink morality; is a curse to the parent, the family, and the Government; is a fertile cause of crime, lying, insanity, debt, and suicide; is a poison to hope and ambition; a slanderer of family ties; a breeder of sensuality; a destroyer of bodily and mental function; and a thing to be viewed with

abhorrence by every honest man and virtuous woman.' This, we find, is taken from *Opium-Smoking in America and China*, by H. H. Kane, M.D., of the De Quincy Home, Fort Washington, New York City. As a short quotation sometimes fails to convey the true opinion of the author, we venture to supplement Dr. Shearer's extract by one or two others taken from the same work. On p. 75, Dr. Kane says: 'Many Chinamen smoke, and we should expect to find them incapacitated for work by it. But it is not so. From the overwhelming testimony given before the Congressional Committee to the effect that Chinamen, placed side by side with American, Irish, and British miners, do more than they, in a given time, on the hardest kind of work, we are fain to believe that the extreme physical deterioration, claimed to result from opium-smoking, must need some modification before being admitted to full belief.' He adds: 'I know men, Americans and Chinese, who are in this city to-day, and can be seen, who have been hard smokers for ten years, and who present none of the features usually ascribed to the smoker. Two, in particular, are of magnificent muscular development.' In his preface, p. vi, he says: 'Upon certain medical points, I believe the testimony of laymen, either English or Chinese, to be wholly worthless, and I hold that, with regard to certain questions; there has been too great readiness to accept all evils happening to the Chinese individual or nation as the certain result of indulgence in this vice. Statistics are too meagre, and too many factors enter into the problem to make it appear as simple as some would have us believe.' He warns us emphatically (p. 77) against those who, with the best intentions in the world, unconsciously resort to exaggeration and misrepresentation in support of their case. 'I firmly believe,' he says, 'that such a course does more harm than good in the majority of cases; the plain unvarnished truth, each statement of which is susceptible of actual proof, and based on facts, working the most good in the long run.'

The *Saturday Review*, in an able article on this subject (Sept. 9th, 1882), says, 'If a little philanthropic fad had not more lives than the proverbial cat, the agitation of the Society for the Suppression of the Opium Trade should by this time be dead and decently buried. The arguments brought against it would long ago have killed anything based on mere reason.' After discussing at some length the political aspect of the question, the reviewer deals with it from a medical point of view. 'Several travellers in China,' he says, 'who are not missionaries, and therefore do not start with a predisposition to find vices, and an overpowering sense of a vocation to cure them, declare that the stories about the ill-effects of opium-smoking are absurdly exaggerated.' In the province of Szechuan, where the habit is more prevalent than anywhere else in China, both Baron Richtenhofen and Mr. Colborne Baber found a healthy and industrious population. The latter gentleman declares that he never saw a single case of opium intoxication, although he had been for some months in the company of smokers in inns and on the road. Reference is made to the recent observations and publications of Sir George Birdwood and Mr. W. H. Brereton, their testimony being much to the same effect. The terrible stories told about the bad effects of the pipe have in all probability a very simple explanation. The missionaries come across men broken down by vices not peculiar to China, and, finding that they smoke, give the opium the credit of having brought them to that sad condition. Certainly,

the energy shown by the Chinese of late years does not harmonise well with pictures of national ruin, produced by this supposed vice. Opium-smoking is found to be compatible, both in Australia and in California, with a formidable degree of industry, intelligence, and sobriety. 'Probably, when the subject is talked about with a little more knowledge, it will be found that the bluster of Californian rowdies, and Australian larrikins, of which Mr. Goldwin Smith condescends to make himself the echo, and the gloomy rhetoric of missionaries, who do all things under a consciousness of Exeter Hall, are about on a par in point of accuracy.' WM. MURRELL, M.D.

SEGUIN ON LARGE DOSES.*

DR. SEGUIN considers that the dose of many remedies ordinarily prescribed in certain nervous diseases—such, for example, as chorea, cerebral and spinal syphilis, and neuralgia—is too small. In advocating large doses, he does so as the result of an extensive practical experience, and not on mere theoretical grounds. At the same time he takes all reasonable precautions, and says: 'I am carefully observant of all the circumstances which render patients susceptible, and always make an allowance for idiosyncrasy. Thus, in first prescribing a potent remedy, I take into consideration the age, sex, and size of the patient, and also make an estimate of his general condition, and note particularly the state of his circulatory organs. Then, for a patient whom I see for the first time, I order very small doses, doses such as the books justify, and, by steady increase, feel my way, fearlessly because watchfully, to the larger doses, often seemingly dangerous doses, which really affect the organism, and may cure the disease.'

Dr. Seguin gives Fowler's solution in doses of from three to thirty minims three times a day. In the case of children or sensitive adults, he may commence with a dose of only two drops, but usually begins with five, every day adding one drop to each dose. He does not attach any very great importance to giving it after meals, but is careful to give it largely diluted with water—half a tumblerful or more. Usually, when a dose of from ten to fourteen drops three times a day is reached, some arsenical symptoms appear, such as diarrhoea, nausea, vomiting, anorexia, or redness and puffiness about the eyes. When these symptoms are noticed, the administration of the arsenic should be suspended for forty-eight hours, and should then be resumed, the dose being still further increased. A remarkable tolerance is shown by most patients—even young children; and doses of twenty, twenty-five, and even thirty drops, three times a day, may be reached without a renewal of the symptoms. In one case, thirty-four drops of Fowler's solution were taken three times a day without the production of any unpleasant symptom. The author has been taught by experience not to expect amelioration of choreic movements until the toxic effects of arsenic are evident, and, in old or relapsing cases, not until the second period of toxicity. He finds it advisable to combine rest, even absolute rest in bed, with the arsenical treatment. If the patient be restless at night, an occasional dose of chloral will do good. Simple acute chorea may

be cured by this plan in a fortnight, and it is rare to meet with any case of chorea that resists this mode of treatment. There is no possibility of any permanent ill effect resulting. The urine of many patients has been carefully examined at the period of saturation with arsenic, but albumen has never been detected. Stomatitis was met with only once, and gastro-intestinal disturbance was never serious or permanent.

Of aconitia (Duquesnel's crystallised), Dr. Seguin also gives comparatively large doses. Some people are powerfully affected by small quantities, so that it is well, especially in the case of females, to begin with from 1-250th to 1-200th of a grain. In neuralgia, after a day's testing with minute doses, it may be given freely—1-100th of a grain every three or four hours, until distinct numbness and a feeling of coldness are experienced in the limbs and face. Then a longer interval should be allowed to elapse before giving another dose. Many people take daily three or four doses of 1-100th of a grain, and remain in a constant state of numbness, not only without inconvenience, but with much benefit. In some cases of chronic epileptiform neuralgia, the patients were kept under the influence of the drug for weeks at a time. In posterior spinal sclerosis, the dose of 1-100th of a grain has been repeated as many as eight times in the twenty-four hours. This form of nerve-pain is not relieved by aconitia, and, curiously enough, these patients rarely exhibit that numbness which is the sign of the action of aconitia in healthy persons. As a rule, the pain of trigeminal neuralgia ceases when the physiological effects of the drug are manifest. It is not alleged that it is a specific in this complaint, but it is certainly the best therapeutic resource at our disposal.

Dr. Seguin deals at length with the question of the maximum dose of conium. He employs the fluid extract of the U.S.P., and gives as much as 60, 80, or even 100 minims at a dose, repeating it, if necessary, as soon as the effect passes off. Of phosphorus he gives, in many nervous diseases, gr. 1-18 every three or four hours. [Some doubt is thrown on this statement by use of an unreliable solution. The author would have done better had he given his phosphorus in the solid form.—*Rep.*] Cases of obstinate facial neuralgia are cured by a few doses. Phosphide of zinc is given in doses of gr. $\frac{1}{6}$ to $\frac{1}{4}$, often in combination with nux vomica or belladonna. Nitrate of silver (crystallised) is administered with marked success in the treatment of locomotor ataxy and various forms of subacute and chronic myelitis, in doses of from a quarter to half a grain. It should be made into pills with some indifferent extract, such as taraxacum, or, perhaps, if there be any special indication for it, with nux vomica or belladonna. It should be given before meals, and even three or four doses may be safely administered in the twenty-four hours. A course of nitrate of silver should extend over two months, which, at the rate of 1 $\frac{1}{2}$ gr. a day, would give 90 grains, a perfectly safe dose as regards freedom from discoloration of the skin. WM. MURRELL, M.D.

KING AND OTHERS ON GRINDELIA ROBUSTA.

THE following notices of the therapeutic action and uses of grindelia robusta are given in the *Therap. Gaz.* for July 1882. Dr. King says that grindeia robusta has been found especially efficacious in

* *The Efficient Dosage of Certain Remedies used in the Treatment of Nervous Diseases.* By E. C. Seguin, M.D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York. Read before the Medical Society of New York, and reprinted from the *Transactions* of 1882.

asthma, giving prompt relief and effecting cures in cases previously rebellious to medication. Occasionally, however, as is, indeed, the case with all therapeutical agents, it has failed; but the circumstances attending these failures have not yet been determined. Further investigations regarding its action in this disease, and the cause of its occasional failures, are required. It has likewise been found efficient in bronchial affections, in pertussis, and in some renal maladies. The fluid extract is the preparation usually employed, the dose of which is from 10 to 15 minims, repeated three or four times a day, as may be required. Children require doses of from 5 to 15 or 20 minims.

According to the *United States Dispensatory*, the herb has a balsamic odour and taste, and a syrup made from the decoction is not unpalatable, and taken internally acts as an expectorant. But the chief value of the plant is as a remedy in asthma. A clergyman who had suffered extremely from that disease, and in whose case all the remedies usually given had been tried in vain, took, on going to bed, a wineglassful of syrup made from the herb, slept soundly through the night, and, under its continued use, had not been compelled for seven months to pass one night out of bed. It has also been very highly commended in iritis, used internally and externally, and as a local application in burns, vaginitis, and genito-urinary catarrh. It may be used as a poultice or injection (half an ounce to the pint).

Stillé and Maisch, in their *National Dispensatory*, describe grindelia as having a persistent acrid and bitter taste, and exciting the secretion of saliva. It is said to reduce the respiration rate, to stimulate the brain and spinal cord, and subsequently to produce a tendency to repose or sleep, with impaired power of the legs. In experiments on frogs, it appeared to arrest breathing, and to cause engorgement of the heart. It increases the secretion of urine, and irritates the kidneys. The herb of this plant is reputed to be useful in whooping-cough and bronchitis, and of singular efficacy in asthma. We have been informed of several cases occurring in aged persons, in which half a teaspoonful of the fluid extract afforded almost instantaneous relief. It has been used with alleged advantage in catarrh of the bladder and of the uterus, and as a dressing for burns and blisters. The dose for a child two years old is stated to be ten drops of the fluid extract every two hours. It is added that no unpleasant symptoms have been observed after large doses.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. FOX, G. H.—An Improved Plan of Using Chrysophanic Acid Externally. (*Med. News*.)
2. JARDINE.—Koroniko, a Remedy for Chronic Dysentery (*Chinese Customs Rep.*)
3. WORMLEY.—Gelsemic Acid. (*Amer. Jour. of Pharm.*, July 1882.)
4. Suppositories for Hemorrhoids. (*Low. Med. News*.)
5. Styptic and Antiseptic Cotton. (*New Remedies*.)
6. HENRY.—Iodoform in Enlarged and Ulcerated Tonsils. (*New England Med. Monthly*, June.)
7. Formule. (*New Remedies*, Aug.)
8. HARNACK.—Carlsbad Salt. (*New Remedies*, Aug.)

9. LIMOUSIN.—New Method of Preparing Blisters. (*Rép. de Pharm.*, June 1882.)
10. SCHIFFER.—Extract of Guachamaca. (*Pharm. Zeit.*, June; and *New Remedies*.)
11. PAVESI.—Saccharate of Coffee. (*Annali di Chim.*, 1882.)
12. CULLIMORE.—Aconite for Hydrophobia. (*Lancet*, Aug. 1882, p. 215.)
13. HUTCHINSON.—Iodine in Erysipelas. (*Brit. Med. Jour.*, Aug. 1882, p. 209.)
14. EDGE.—Herpes Zoster during Arsenical Treatment. (*Brit. Med. Jour.*, Aug. 1882, p. 308.)
15. BARTON.—Sulphide of Calcium in Cancer. (*Lancet*, Aug. 1882, p. 332.)
16. LITTLE.—Medical Rubbing. (*Brit. Med. Jour.*, Aug. 1882, p. 351.)
17. THOMPSON.—Lycoperdon Giganteum as a Hæmoe-static. (*Brit. Med. Jour.*, July 2, 1882, p. 136.)
18. STARTIN.—Chaulmoogra Oil in Leprosy. (*Brit. Med. Jour.*, July 1882, p. 159.)
19. DICK.—On Tapeworm. (*Brit. Med. Jour.*, July 1882, p. 202.)
20. SCRIVEN.—The Treatment of Dysentery. (*Lancet*, Aug. 1882, p. 259.)
21. SENATOR.—The Therapeutic Use of Soft Soap. (*Berl. Klin. Woch.*, No. 38, 1882.)
22. ALBERTONI.—The Influence of Certain Drugs on the Irritability of the Cerebrum, with Remarks on the Treatment of Epilepsy (*Archiv. für Experim. Pathol. und Therap.*, Band xv, Heft 3 and 4.)
23. FRÄNKEL.—The Treatment of Catarrhal Angina (Tonsillitis). (*Verhandl. der Berl. Gesellsch.*, Band xii.)

1. Fox on an Improved Plan of using Chrysophanic Acid externally.—Dr. George H. Fox (*Med. News*), says that, while chrysophanic acid is of the highest value as an external remedy in cutaneous affections, its action is difficult to control. As all know who have had experience in its use, it is very liable to produce a severe and unexpected dermatitis, and almost certain to ruin the underclothing and bed-linen of the patient. These objectionable features he has endeavoured to obviate by adopting the following method of applying the remedy. A soft paste is made by rubbing the chrysophanic acid with a sufficient quantity of water and smeared upon the psoriatic patches, the scales of which have been previously removed, by one or more hot baths, with soap friction. As soon as the paste has dried, which it does in one or two minutes, a layer of collodion should be allowed to flow over each patch and to harden into a protective coating. This will remain in place for several days or longer, according to the situation of the patches, and when it falls or is washed off, the application of the powder and the collodion should be repeated. By this procedure the chrysophanic acid in full strength is kept in contact with the affected skin, and prevented from exciting undue inflammation of surrounding parts or staining the clothes. A mixture of the powder and the collodion may be used, but it is less efficacious. A film of the collodion doubtless interferes with the action of the acid upon the skin. A somewhat similar plan which Dr. Fox has tried consists in the use of gutta-percha tissue to retain a strong chrysophanic ointment in contact with psoriatic patches. The edges of this tissue will adhere tightly to the skin if a small camel's-hair brush, dipped in chloroform, be passed rapidly beneath them.

2. Jardine on Koroniko, a New Remedy for Chronic Dysentery.—Koroniko, from *Veronica parviflora*, is reported by Dr. J. Jardine (*Chinese Customs Rep.*) as a potent remedy in cases of chronic dysentery, varying in duration from six weeks to four years, and in which from twenty to thirty mo-

tions containing blood and mucus were voided daily. Fifteen doses of tincture of koroniko reduced them to one-half, another fifteen doses reduced them to three or four daily, and a third like quantity effected a complete cure. Koroniko seems to be the vulgar name adopted in New Zealand for the plant.

3. *Wormley on Gelsemic Acid*.—Professor Theodore G. Wormley, in the *Amer. Jour. of Pharm.*, July 1882, has contributed a valuable chemical examination of the root of *Gelsemium Sempervirens*. His principal aim is to show that gelsemic acid and esculine (found in the bark of the horse-chestnut) are not the same chemically, as alleged by M. Sonnenschein and Mr. Charles Robbins. Prof. Wormley announced, in the *Journal of Pharmacy* for June 1870, that *Gelsemium Sempervirens* contained a non-nitrogenised principle of an acid reaction which was named gelseminic or gelsemic acid, and also a strongly basic principle, which was named gelsemia or gelsemine. Professor Wm. Procter, jun., made a similar analysis about 1859-60 in the *American Journal of Pharmacy*. Of twenty-five cases of gelsemium-poisoning collected, thirteen proved fatal. Mr. Wormley admits that there is no known chemical antidote. *Post mortem* detection of the presence of gelsemium can be more readily and fully obtained than in the case of any other vegetable poisons. Both the acid and the alkaloid are recognised by their fluorescent properties. As esculine has the same fluorescent properties, it will be necessary to extract the gelsemium with ether, as ether does not extract esculin.

4. *Suppositories for Hemorrhoids*.—The following formula is given in the *Louv. Med. News*. R. Iodoform, 3j; balsam of Peru, 3ij; cacao butter, white wax, aa, 3jss; calcined magnesia, 3j. Incorporate the mass thoroughly and divide into twelve suppositories. Insert one after each evacuation of the bowels, and oftener if needed.

5. *Styptic and Antiseptic Cotton*.—The following formulæ are given in *New Remedies*. Styptic Cotton: Solution of chloride of iron (sp. gr. 1.480), 2 parts; distilled water, 12 parts; potash alum, 1 part; purified cotton, q. s. Dissolve the alum in the water, add the solution of chloride of iron, and soak a sufficient amount of purified cotton in the mixture. Dry it at a temperature below 140 deg. F. Pick it up and preserve it in a stoppered bottle. Styptic and Antiseptic Cotton: Tannic acid, 5 parts; carbolic acid, 4 parts; alcohol, 50 parts; purified cotton, q. s. Dissolve the acids in the alcohol, and soak a sufficient amount of purified cotton in the solution. Dry it at a temperature below 140 deg. F. Pick it up and preserve it in a stoppered bottle.

6. *Henry on the Use of Iodoform in Enlarged and Ulcerated Tonsils*.—Dr. Henry describes (*New England Med. Monthly*, June 15) a number of cases of hypertrophy and ulceration of the tonsils, which he says he has cured by the use of iodoform in the form of spray. He was thus able to get the local effects of a strong solution, made by dissolving the powder in ten parts of strong sulphuric ether. He says that the value of iodoform is now conceded by all those who have had any experience in its use in this class of affections. The difficulties in depositing it on the surface of the glands have deterred many from adopting it in every-day practice. In powder it is easily deposited over the surface of a wound, or an ethereal solution can be passed over a surface that is exposed to the air; but this is difficult in the case of the tonsils and pharynx, and especially the posterior portion of the tonsils. The use of very strong specially constructed spray-tubes, and

the use of compressed air, with a very heavy pressure, appear to be necessary. Three such tubes are essential—one turned downward, one straight, and the third turned upward. With the first, the larynx and surrounding lower parts can be treated; with the straight tube the middle part of the throat, pharynx, fauces, palate, and anterior portion of the tonsils can be sprayed. The posterior portion of the tonsils can only be sprayed with the tube with the downward curve. To do this well, the patient must be artificially excited to the effort at retching. By so doing the tonsils are turned forward and sideways, thus enabling the operator to pass the curved tube behind the posterior portion of the glands. In some, this effort at retching is involuntary, on the slightest provocation. It can be easily induced by tickling the palate with the end of the tube. The deposit of the iodoform with the apparatus described is almost instantaneous, and is easily controlled, and can be directed to any spot. With the first expiration of air following the withdrawal of the tube, the ether is evaporated and expelled, leaving the iodoform well impressed on the glands and surrounding mucous surfaces. The coating is of a pale yellow colour, and with the evaporation of the ether all unpleasant sensation is removed. The slight pungent taste and odour of the ether pass off entirely with a few fresh inspirations and expirations. Care must be taken with the tubes, for they are easily filled up with crystals that are difficult of removal. When the iodoform is first exposed to the action of the ether in the proportion mentioned, it is perfectly soluble. When the ether has been evaporated, the remaining iodoform in the tubes crystallises, and is not again soluble to the same extent.

7. *Formulæ*.—The following formulæ are selected from the non-official formulary of the Dutch Society for the Advancement of Pharmacy (*New Remedies*, August 1882).

Ferri Tannas: Tannate of Iron.—Solution of chloride of iron (ferric; spec. grav., 1.480-1.484), 35 parts; tannic acid, 30 parts; alcohol (stronger), 12 parts; water of ammonia, q. s.; distilled water, q. s. Dilute the solution of chloride of iron with 200 parts of distilled water; precipitate completely with water of ammonia, collect the precipitate, wash it well, and mix it with a solution of the tannic acid in 40 parts of distilled water. Macerate for a few hours, and then add the alcohol. Collect the precipitate upon a strainer, wash it, and dry it. It should be a coal-black powder.

Plumbi Tannas: Tannate of Lead.—Solution of subacetate of lead, 100 parts; tannic acid, 38 parts; distilled water, q. s. Dilute the solution of subacetate of lead with 500 parts of distilled water, and add to it the tannic acid, previously dissolved in 500 parts of distilled water. Let the mixture stand a few hours, collect the precipitate upon a filter, wash it with about 500 parts of cold distilled water, and dry it at 25°-30° C. (77°-86° F.).

Tincture Alexipharmaca Huxhami: Huxham's Compound Tincture; Huxham's Tincture (of Bark).—Red cinchona (Javanese or East Indian), in coarse powder, 48 parts; orange peel, deprived of the inner white layer, 36 parts; serpentaria, bruised, 9 parts; saffron, finely cut, 4 parts; stronger alcohol, 240 parts; water, 240 parts. Macerate for seven days, express, and filter.

Tinctura Antasthmatica: Anti-asthmatic Tincture.—Liquorice root, cut and bruised, 12 parts; iris (blue flag) root, 6 parts; squill, dried and bruised, 3

parts; saffron, finely cut, 2 parts; alcohol, 214 parts; benzoic acid, 1 part; sugar, 18 parts. Macerate the first four ingredients with the alcohol during fourteen days; then express and dissolve in the strained liquid the acid and sugar. Finally filter.

Tinctura Antifebrilis Warburgi: Warburg's Fever Tincture (Abbreviated Formula).—Tincture of orange-peel, 5 parts; compound tincture of aloes, 20 parts; stronger alcohol, 15 parts; spirit of camphor, 2 parts; sulphate of quinine, 1 part. Dissolve the sulphate of quinine in the alcohol, and add the other liquids. N.B.—Tincture of orange-peel (*Dutch Pharm.*) is prepared by macerating one part of sweet orange-peel (only the outer yellow portion) with 6 parts of alcohol for 14 days. Compound tincture of aloes (*Dutch Pharm.*) is prepared by mixing equal parts of tincture of aloes (aloes 1, alcohol 8), tincture of myrrh (myrrh 1, stronger alcohol 8), and tincture of saffron (saffron 1, alcohol 8). Spirit of camphor is composed of camphor 1, stronger alcohol 12 parts.

Tinctura Chinoidini: Tincture of Chinoidine.—Purified chinoidine, in fine powder, 2 parts; hydrochloric acid, 1 part; alcohol, 17 parts. Dissolve the chinoidine in the alcohol and acid, and filter.

Tinctura Digitalis Ætherea: Ethereal Tincture of Digitalis.—Digitalis, dried and in coarse powder, 2 parts; ether, 5 parts; stronger alcohol, 15 parts. Macerate during seven days, express, filter (avoiding loss by evaporation), and preserve the filtrate in a dark place.

Tinctura Gelsemii: Tincture of Gelsemium.—Gelsemium, in powder, 1 part; alcohol, 10 parts. Macerate during three days, express, and filter.

Tinctura Kamala: Tincture of Kamala.—Kamala, 3 parts; stronger alcohol, 8 parts. Macerate during three days, and filter.

Tinctura Guarana: Tincture of Guarana.—Extract of guarana, 1 part; alcohol, 16 parts. Dissolve the extract in the alcohol, and, if necessary, filter.

Extractum Guarana: Extract of Guarana.—Guarana, 1 part; stronger alcohol, 3 parts; water, q. s. Mix the guarana with 2 parts of the alcohol and 3 parts of water, and let it stand three days, occasionally shaking. Then express and treat the residue with a mixture of 1 part of the alcohol and 2 parts of water. Let it stand during one day, express, unite, and filter the strained liquids, and evaporate them, on a water-bath, to a thick extract.

Tinctura Puchury: Tincture of Puchury.—Puchury beans (from *Nectandra Puchury* Nees), in coarse powder, 1 part; stronger alcohol, 8 parts. Macerate during seven days, express and filter.

8. *Harnack on Carlsbad Salt.*—Dr. Harnack of Strasburg, who assigns no therapeutic value to any constituent except the chloride, sulphate, and bicarbonate, has found the salt to have the following composition: Sodium bicarbonate, 36.19 parts; sodium chloride, 17.28 parts; sodium sulphate, 46.09 parts. He, therefore, recommends (*New Remedies*, Aug. 1882) to prepare the artificial salt as follows: Sodium sulphate, 100 parts; sodium bicarbonate, 80 parts; sodium chloride, 40 parts.

9. *Limousin on a New Method of Preparing Blisters.*—M. Limousin (*Rép. de Pharm.*, June 1882) has devised a new form of blister, with a view to afford a greater variety of choice in degree and kind of vesication, and also with a view to preserve the ready-made blister. He spreads a thin layer of ordinary blistering cerate upon strong thin unsized paper, and covers it with the same. The vesicating layer is about one and a half millimètres in thick-

ness, and one of its surfaces is camphorated. When using the blister, its outline is marked upon the paper covering it; it is then cut off and applied to the part by means of a piece of adhesive plaster. The covering paper may be readily removed, both from the plain and from the camphorated side, by means of a wet sponge. If the physician order a blister covered with oiled paper, it is only necessary to saturate the covering paper with oil. The same process may be also used for the preparation of other plasters.

10. *Schiffer on Extract of Guachamaca.*—Dr. Schiffer, in a paper lately read before the Medical Society of Berlin (*Pharm. Zeit.*, June 7th), states that he had obtained some of the extract of guachamaca from Dr. Karl Sachs, who had come into possession, while returning from Venezuela, of two trees, to which the most remarkable effects are ascribed by the natives. The plant appears to have become only recently known; only a few scattered botanical notices by some South American physicians exist, according to whom it belongs to the natural order Apocynaceæ. The best and most simple preparation is an aqueous extract, prepared on the water-bath. It contains an alkaloid, soluble in water, but little soluble in absolute alcohol, and insoluble in ether or chloroform. In these respects it resembles curare; also by the fact that the active principle is almost completely precipitated by tannin. Most of the alkaloid exists in the bark and contiguous layers; some, however, also in the wood. The therapeutic effect differs much according to the season. During the rainy season, a copious supply of milky juice exudes from incisions made in the bark. This juice is the most active form. To produce the specific effects of the drug, one-sixth of a grain of the extract is required for a frog. The symptoms, varied in intensity by the dose, begin to show themselves after fifteen to eighteen minutes, and then follow each other rapidly. At first the animal becomes tired, hangs down its head, permits itself to be laid on the back, does not draw up the leg when touched, etc. In a few minutes it appears paralyzed, as if by curare, with this difference however, that respiration continues. The circulation and action of the heart are, of course, unchanged. If the dose be large, death ensues; if moderate, recovery takes place after one or two days. Dr. Schiffer had, so far, made a few experiments of the remedy upon man. A small dose injected in himself produced no abnormal effects. A hypodermic injection of one sixth of a grain, administered to a young man suffering from spasms (in Dr. Frerichs's clinic at Berlin), remained without effect for three-quarters of an hour, but afterwards the patient fell into a deep sleep, lasting three hours (in day-time), and then awoke without feeling the slightest untoward effects. Dr. Schiffer, therefore, believes that the remedy may be found valuable in diseases involving an exaggerated action of the motor apparatus, and possibly also as a general hypnotic.

11. *Pavesi on Saccharate of Coffee.*—Dr. Carlo Pavesi (*Annali di Chim.*, 1882) describes a new method of concentrating and administering the valuable and useful constituents of coffee as follows:—Roasted coffee (best), 1 part; refined sugar, 2 parts; warm water, q. s. The coffee is exhausted, in a convenient displacement apparatus, of all its soluble constituents, by means of the warm water; the clear brown percolate is mixed with the sugar, and evaporated, at a temperature not exceeding 122° F. in a suitable apparatus, to dryness. Finally, it is reduced to powder, and kept in well-closed vessels. The

evaporating vessel should be shallow, so as to present a large surface of liquid to the air; or, better still, a vacuum-apparatus may be used. The product is a brownish powder, of a coffee odour, of a sweet and slightly bitter, very agreeable taste, and very soluble in cold water. Dissolved in boiling water, it yields a very fine cup of coffee. If made into a paste with tragacanth, it may be formed into tablets or troches.

12. *Cullimore on Aconite for Hydrophobia.*—In the *Lancet*, August 1882, p. 215, Mr. Cullimore records a case of hydrophobia successfully treated by the administration of aconite. The patient, a boy, aged ten, came under treatment three weeks after being bitten by a supposed rabid dog, with a painful and angry looking wound, high temperature, and the usual symptoms of hydrophobia. The patient was placed in a quiet corner, fed on milk thickened with arrowroot, and a mixture of one minim of the tincture of aconite, six grains of bromide of potassium, six minims of tincture of cinchona, and water to half an ounce, to be taken every half hour for twelve doses, and then three times a day. On the fourth day the patient had made some improvement, which continued steadily till the twelfth, when he was well enough to be discharged. Aconite in hydrophobia has a double object. It eliminates the poison from the blood, and it relieves the accompanying congestion of the nerve centres. Mr. Cullimore recommends minim doses of the tincture as a prophylactic to all who may be bitten by animals about whose condition there is the slightest suspicion, as it acts like a sedative, quieting fidgets, one of the earliest and commonest symptoms of rabies.

13. *Hutchinson on Iodine in Erysipelas.*—In the *Brit. Med. Jour.*, August 1882, p. 209, Dr. C. S. Hutchinson records a case of a large, robust man, who was thought to be *in extremis* from a violent attack of idiopathic erysipelas of the head and face. Iron and the usual internal remedies had been tried; but no external application had been used. Iodine was now painted on the scalp. This had a magical effect, the patient being out of danger two days afterwards, the amendment beginning with the first application of the iodine. Dr. Hutchinson has never before seen so desperate a case recover so quickly. [A reference to the *Medical Digest* shows that the value of iodine has been known for thirty years.—*Rep.*]

14. *Edge on Herpes Zoster occurring during Arsenical Treatment.*—In the *Brit. Med. Jour.*, August 1882, p. 308, Dr. Edge records the case of a girl ten years of age, who after taking three-minim doses of the solution three times a day for chorea, had a well marked attack of herpes zoster on the right side. There were none of the usual constitutional symptoms which often supervene after taking a prolonged course of arsenic. The treatment was suspended on the appearance of the rash; but, in similar cases reported by Mr. Hutchinson and others, although the arsenic was continued, the herpes ran its course and disappeared in the ordinary time.

15. *Barton on Sulphide of Calcium in Cancer.*—Dr. Barton (in the *Lancet* for Aug. 1882, page 332) records three cases of scirrhus of the breast, in each of which, both before and after removal of that gland, he administered sulphide of calcium for a considerable time, with apparently great benefit; in none of the cases was there any sign of a return of the disease, after some months. Unfortunately, he has omitted to state how long this improvement

actually remained; and, as it is not an uncommon thing for a cancer patient, after operation, to go on well for some time without any treatment at all, Mr. Gaylor has taken the opportunity, on page 377, to call the efficacy of the sulphide of calcium into question.

16. *Little on Medical Rubbing.*—In the *Brit. Med. Jour.*, August 1882, p. 351, is a report of a paper, read at the Annual Meeting of the British Medical Association in Worcester, on medical rubbing, by Mr. Fletcher Little, in whose opinion it is one of the most effective and powerful remedies we possess, as it can restore a wasted muscle, unloose a stiffened joint, restore the enfeebled circulation, bring back sensation to a benumbed limb, soothe irritated nerves, promote digestion and assimilation, causing healthy waste and excretion. The directions given for the rubbing are very simple; no muscle should be rubbed except it be soft, and no joint except the skin over it be relaxed; the limbs must always be rubbed from the extremities upwards, and the trunk from above downwards. Bearing these in mind, Mr. Little states he can do, with an intelligent rubber, all that the Zander establishment performs with its costly and ingenious machines.

17. *Thompson on a New Hæmostatic.*—In the *Brit. Med. Jour.*, July 2nd, 1882, p. 136, Mr. Ed. Thompson draws attention to the ordinary puff-ball or lycoperdon giganteum, which grows close to the roots of trees in some of our woods, as a hæmostatic, and cites a case of an old woman, who, having previously been weakened by frequent hæmorrhage from a cancer of the breast, constantly applied the puff-ball for seventeen years, and during that period had little or no hæmorrhage and much less suffering. Mr. Thompson has used this remedy, and found it stop hæmorrhages in which iron and matico had failed. Mr. Fagan, of Belfast, also has found it most efficient as a hæmostatic. In one case, it controlled arterial hæmorrhage from the bone in the neighbourhood of the eyeball. It seems that its properties are well known to the Irish surgeons.

18. *Startin on Chaulmoogra Oil in Leprosy.*—Mr. Startin reports a case of true eastern leprosy in the *Brit. Med. Jour.*, July 1882, p. 159. The patient, after many years' residence abroad, chiefly in the tropics, with little or very bad food, and having had ague very severely, became covered with tubercles, which suppurated, forming ulcers with clean-cut edges; he suffered from loss of muscular power, numbness, loss of sight, and other nervous phenomena, pointing to the diagnosis of leprosy. All treatment had been unavailing, till Mr. Startin ordered him chaulmoogra oil internally, and to be rubbed on the affected parts twice daily; within a few weeks reparative action was set up in the ulcers and only a few fresh tubercles appeared, and these, instead of suppurating, became abortive and died away. Mr. Startin concludes that leprosy can be relieved if not cured by this remedy.

19. *Dick on Tape-worm.*—Dr. Forbes Dick, in the *Brit. Med. Jour.*, July 1882, p. 202, states his belief that the liquid extract of male fern will expel not only the segments but also the head of the tape-worm if given in sufficient doses. His mode of administration is as follows. The patient may be allowed a full mid-day meal, and a little bread and tea at 5 p.m. At 10 p.m., a binder is to be applied to steady the stomach; and, on lying down, two drachms of liquid extract of male fern, in mucilage, with a little spirits of chloroform, are to be taken, to

be followed early the next morning by half an ounce of turpentine beaten up with the yolk of an egg. After this, the patient is to be kept quiet to prevent strangury. Dr. Forbes Dick has found this much more certain than taking several small doses.

20. *Scriven on the Treatment of Dysentery*.—Mr. Scriven in the *Lancet*, Aug. 1882, p. 259, recommends the use of large enemata, either of plain warm water or with the addition of alum, in the ulcerative stage of dysentery. The patient should be laid on his right side, the pelvis raised slightly and the legs flexed during the injection. The fluid must be injected slowly, and suspended for a few minutes if it causes griping. The quantity used must be about four pints. As an adjuvant to this, a small enema of forty minims of tincture of opium, in four drachms of mucilage, may be used to produce quietude of the bowels and sleep. In acute dysentery, Mr. Scriven has had most satisfactory results from a dose of five grains of calomel, followed in three hours by four drachms of castor-oil. If the symptoms continue, eight leeches are applied to the anus, ipecacuanha and opium being administered at intervals of twelve hours, and, at a later period, bael fruit to check diarrhoea. For children of thirteen months, three or four grains of ipecacuanha powder, with half a grain of compound kino powder, act as efficiently as a larger dose in the adult. In children still younger, calomel twice a day acts better than ipecacuanha. Mr. Scriven makes these observations from a long Indian experience.

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21. *Senator on the Therapeutic Use of Soft Soap*.—Professor Senator considers that amid the many new remedies introduced, some of the old have fallen undeservedly into disuse, among these especially soft soap (*Berl. Klin. Woch.*, No. 38, 1882). He has used inunctions of soft soap in numerous cases with most distinct benefit, viz., in chronic non-scrofulous glandular swelling, in indolent syphilitic glandular swelling, and in serous exudations, including the exudations in synovial cavities. He cannot come to a definite conclusion as to the *rationale* of the action, whether it is the massage employed, or the irritation produced, or the alkali absorbed; but the fact of the increased absorption under this treatment he considers undoubted.

22. *Albertoni on the Influence of Certain Drugs on the Irritability of the Cerebrum, with Remarks on the Treatment of Epilepsy*.—Professor Albertoni's experiments were performed on dogs and apes, the drugs used being bromide of potassium, atropine, and cinchonidine. For full details we must refer to the original (*Archiv für Experim. Path. und Therap.*, Band xv, Heft 3 and 4, 1882). The author sums up his results as follows. 1. The continued use of bromide of potassium very markedly reduces the irritability of the cerebrum in dogs. Electric stimulations, which in the normal condition are effective, produce, after the use of bromide of potassium, either no result or a very slight one. Even a single large dose considerably dulls the cerebral irritability. After continued use of bromide of potassium, it is no longer possible by electric irritation of the cortex cerebri in dogs (the area, namely, for the facial nerve and the extremities) to cause epileptic attacks, not even when much stronger currents are used than those sufficient to produce them in the normal condition. From this it may be concluded that the bromide of potassium presents a strong resistance to the extension of the discharge from the irritated point to the rest of the cerebrum. 2. Atropine increases the irritability of the cerebrum, the surface

of which, during its use, shows a greater sensitiveness to electric stimuli. This action is especially marked with not very high but still poisonous doses of the drug. Differences of irritability and development of the cerebrum explain the following interesting facts:

a. The slight action of atropine on children and young dogs; b. The much stronger cerebral action of atropine on the dog than on the sheep, the brain of the latter, although more developed, being much less irritable; c. The absolute inertness of this material in the case of pigeons, whose cerebrum is unirritable. The possibility of causing epileptic attacks in the higher mammalia by electric stimulation of the cortex cerebri is neither removed nor weakened by continued use of atropine. 3. Cinchonidine in therapeutic doses increases in epileptics the frequency of the attacks, and, along with all other active principles of cinchona bark, is contraindicated in epilepsy. After removal of the cerebrum or psychomotor centres, cinchonidine still causes epileptic attacks. Its action is on the central motor ganglia. The continued use of bromide of potassium prevents the production of epileptic attacks in dogs by large doses of cinchonidine. It also prevents the fatal action of cinchonidine. The continued use of atropine in no way affects the epilepsy-producing, nor the fatal action of cinchonidine. It will, therefore, be seen that bromide of potassium would be of use in cases of epilepsy arising from tension of the nerve-centres, while atropine would be absolutely injurious. In cases of epilepsy from fright, or from congestion of cerebral vessels, or in cases of peripheral origin, atropine may possibly be useful.

23. *Fraenkel on the Treatment of Catarrhal Angina (Tonsillitis)*.—Under this term, Dr. Fraenkel (*Verhandl. der Berl. Med. Gesellsch.*, Band xii, p. 239) understands mainly that form called tonsillitis lacunar, a disease which, he says, in the great majority of cases, subsides without treatment, so that our object can only be to shorten or render it less severe. The use of astringents, such as nitrate of silver, he considers useless, as the disease lies mainly in the crypts of the tonsils, which the astringent does not reach. The same is true of gargles and of inhalations, while the former, in addition, frequently of themselves cause unpleasant sensations in the throat. At the same time, it must not be understood from this that the throat is to be left dry in this affection. The use of emollients gives frequently much relief. Dr. Fraenkel has tried submucous injections of a carbolic acid solution, so as to be sure of reaching the crypts, but has seen no benefit from them. Among internal remedies for the disease, Dr. Fraenkel has seen no good result from chlorate of potash, which he has found most useful in certain forms of stomatitis. Of guaiacum, recommended strongly by Dr. Morell Mackenzie, he has had no experience, nor has he had any experience of tincture of aconite, which last remedy, he appears to think, has been borrowed from homœopathic sources by English physicians. Ice and cold applications are to many most grateful, while to others they are absolutely intolerable. For some time, Dr. Fraenkel has treated all his cases either with quinine or with salicylate of soda. Of fifteen cases treated with large doses of quinine, not one has lasted longer than forty-eight hours, the usual average being from two to five days, he believes. Dr. Fraenkel himself has suffered frequently from this disease, and has never so quickly recovered from any treatment as from this. He takes three doses of about 4 grains of quinine within an hour at night. Notwithstanding, however, that

quinine so shortens the disease, it does not in certain cases prevent the formation of peritonsillar abscess. The rationale of the action of quinine Dr. Fraenkel does not pretend fully to understand. Its antiphlogistic and antifermentative actions seem scarcely enough to explain it, for salicylic acid seems to have no such favourable action, and while tonsillitis is well known to be infectious, it can scarcely be called one of the infective diseases proper, for one attack rather predisposes to others. He recommends the treatment to the attention of physicians, as each can have only a limited number of such cases under his care.

JAMES ANDERSON, M.D.

MEDICINE.

RECENT PAPERS.

1. NEALE.—On Scurvy. (*Lancet*, Aug. 1882, p. 321.)
2. HENDERSON.—Perforating Ulcer of the Duodenum. (*Brit. Med. Jour.*, July 1882, p. 160.)
3. MILLICAN.—Causes of Acute Tonsillitis. (*Lancet*, July 1882, p. 169.)
4. BULL.—Abscess of the Spleen Perforating the Stomach. (*Lancet*, Aug. 1882, p. 260.)
5. OTT.—On a Sign of Tubercular Meningitis. (*Philad. Med. Times*.)
6. REMAK.—Pathology and Treatment of Localised Muscular Spasm. (*Verhandl. der Berl. Med. Gesellsch.*, Band xii.)
7. FRÄNKEL.—The Connection between Nervous Asthma and Diseases of the Nose. (*Ibid.*)

1. *Neale on Scurvy*.—In the *Lancet*, Aug. 1882, p. 321, Mr. W. H. Neale, late Medical Officer of the *Eira*, gives an account of his fifteen months' experience in the arctic regions, during which there was scarcely any illness in a crew of twenty-five men. He expresses the opinion that if men were to live on the flesh of animals indigenous to the country, even without vegetables, they will run very little risk of scurvy; he also suggests that blood should be used as an antiscorbutic; should this prove to be a prophylactic, it will greatly enhance its value as a portable, nutritious, and wholesome food for travellers. These conclusions are supported by the experience of Dr. Lucas, which occurred, curiously enough, near the tropics. He states on p. 331 that, in the case of the semi-savage hill tribes of Afghanistan and Beluchistan, the food consists mainly of meat, and is altogether devoid of vegetables; yet these people are quite free from scurvy. This is explained by the fact that fresh meat is alkaline, and continues so till *rigor mortis* passes off, when it becomes acid. In the arctic regions, *rigor mortis* does not occur; in hot countries, the meat must be eaten before it can occur. Mr. Neale gives, on p. 370, a list of the vegetables saved from the *Eira*, and the manner in which they were preserved and cooked. Of these, the Dutch vegetables, which are mixed with a good quantity of fat, are spoken of most highly.

2. *Henderson on Perforating Duodenal Ulcer*.—Mr. W. Henderson reports a case of perforating duodenal ulcer in the *Brit. Med. Jour.*, 1882, p. 160. The patient, a groom, aged 34, came under treatment for an agonising pain in the right hypochondriac region, which was relieved by morphia; this pain returned occasionally during six months, after which period, the patient, after tea, in stretching himself while hanging up a picture felt the pain most severely, and died within twenty-four hours in a state

of collapse. At the *post mortem* examination, on opening the abdomen, two quarts of extravasated matter were found in the abdominal cavity; and a round ulcer, half an inch in diameter, with thick rounded margins, and without any adhesions, was discovered in the duodenum. A second case is cited with similar symptoms, but fortunately followed by recovery, so that the diagnosis could not be confirmed.

3. *Millican and others on the Causes of Acute Tonsillitis*.—Mr. Kenneth Millican, in the *Lancet* for July 1882, p. 169, cites the case of a Cambridge student who suffered from acute tonsillitis while undergoing great mental anxiety, the result of an examination, and having his meals irregularly, thus confirming Dr. Atkinson's statement that it generally depends on these two causes. Mr. Bays, in the *Lancet* of Aug. 26, p. 336, records a case of a man, aged 57, who was subject to tonsillitis since he was twenty, but had been free for ten years, having an acute attack, the cause of which was obscure. His meals were quite regular, and the only mental anxiety he had was the dread of apoplexy, for the premonitory symptoms of which he was on his club. Although salicylate of soda was given from the commencement, the disease ran through its course to suppuration. On the same page, Dr. Atkinson mentions that he has seen it in connection with masturbation, and that in his opinion it is never caused by cold alone. A curious addition to the treatment of this disease is made on p. 377 by Mr. Grewcock, who confidently recommends when the patient cannot swallow to stand opposite him and pull downward the lobes of his ears. While doing this he can perform the act of deglutition without pain. Mr. Grewcock leaves the theory of this extraordinary fact to be found out by others. [Having tried this plan personally, the reporter has found it to be a failure.—*Rep.*]

4. *Bull on Abscess of the Spleen Perforating the Stomach*.—Mr. Bull reports, in the *Lancet* of Aug. 1882, p. 260, the case of a man, aged 42, who had served in the army in India for nine years, during which period he was very temperate in his habits, but suffered occasionally from ague. He had worked as a groom, and indulged freely in drinking for the last nine years. His last illness began with nausea and vomiting of blood, and was characterised by frequent hæmatemesis, malaria, and rigors, each rigor leaving him extremely exhausted; the only abnormal physical sign being tenderness on great pressure, over a surface not larger than a sixpence, in the epigastric region immediately below, and slightly to the left of, the ensiform appendix. He became weaker after each rigor, and died in an exhausted state after one on the eleventh day. At the necropsy, four perforating ulcers were found at the splenic end of the stomach; behind these was an abscess in the spleen; the substance of this organ was soft and friable. The ulceration had opened up a medium-sized splenic artery. All the other organs were healthy. Mr. Bull is of opinion that hæmorrhagic infarction occurred during one of the patient's attacks in India, which remained latent, and that consecutive inflammation and suppuration were accelerated by intemperate habits, and failing health.

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5. *Ott on a Sign of Tubercular Meningitis*.—Dr. Lambert Ott, in the *Philadelphia Med. Times*, describes, as a sign of tubercular meningitis, extreme tenderness elicited on pressing the femur. He observed this incidentally in one case and confirmed

it in a second case, pressure upon other portions of the extremities causing no distress whatever.

6. *Remak on the Pathology and Treatment of Localised Muscular Spasm*.—Dr. Remak demonstrated three cases of this nature in the Berlin Medical Society (*Verhandl. der Berl. Med. Gesellsch.*, Band xii, p. 127). The first consisted in clonic spasm of the muscles of the right face, more especially the zygomatics—the remnants of a complete facial paralysis on that side, following an injury to the facial nerve in the lower part of the aqueduct of Fallopius. He found the electrical irritability of the zygomatics much lower than that of the other nerves of the face. The second case was a recurrence of severe spasm in the muscles supplied by the right spinal accessory, treated and apparently cured by his father eighteen years before, and recorded by him as a case of torticollis. His treatment had consisted in the use of a constant galvanic current, with the positive pole placed over the right cervical transverse processes, and more especially over the fourth and fifth. By a repetition of the same treatment, Dr. Remak achieved very great relief of the symptoms. The third case was that of a child with clonic spasms of the platysma myoides, and also of the deeper muscles at the back of the neck, the result of a fall. Treatment with a constant galvanic current, the positive pole over the muscles affected, diminished but did not cure the spasms.

7. *Fränkel on the Connection between Nervous Asthma and Diseases of the Nose*.—Voltolini records two cases of well-marked asthma cured by the removal of numerous polypi from the nose. Hänisch also records two cases of the same nature, in both of which the asthma was cured by operation, and recurred on the recurrence of the polypi, to be again cured by operation. Hartmann and Schäffer have each recorded one case, and Dr. Fränkel has already recorded two others, and now gives the details of three other cases observed by him (*Verhandl. der Berl. Med. Gesellsch.*, Band xii, p. 99). In all of these (one being a recurrence in a previous case), Dr. Fränkel himself observed the asthma, and has ascertained that the cure has been a lasting one, not a single attack of asthma having occurred after complete removal of the polypi and cauterisation of the points of attachment. The causal connection between the two affections is, Dr. Fränkel considers, fully established. The stenosis of the nasal passage by the polypi does not account for the dyspnoea, for, in certain of Dr. Fränkel's cases, there was no stenosis whatever, nor was there any inflammation or congestion to explain it. Considering that bronchial spasm most fully explains the symptoms shown by asthma, Dr. Fränkel believes that the asthma is here caused by a reflex influence arising from the irritated mucous membrane with which the polypi are in contact. This explanation, he considers, fits in with the other known forms of asthma, cardiac, dyspeptic, uterine, etc. Asthma from nasal polypi is, he says, comparatively rare, and there is no difference in situation or structure in those polypi that cause asthma. As to a certain extent supporting his theory, Dr. Fränkel points out that most asthmatic patients have their attacks at night followed in the morning by a clear watery discharge from the nose. He notes, also, the occurrence of hay asthma, asthma from inhalation of ipecacuan powder, and the fact that the smoking of various remedies frequently greatly benefits asthma. Dr. Fränkel records a carefully observed case, where severe and long existing asthma appeared to be cured by the cure of a chronic nasal

catarrh. The mucous membrane was much swollen and congested. This condition was cured by local application of a solution of nitrate of silver, and the asthma disappeared—not the dyspnoea merely, but also the physical signs which had previously been present in the lungs. JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. LESSER.—The Operative Treatment of Caseating Glandular Swellings. (*Centralbl. für Chir.*, No. 22, 1882.)
2. PILCHER.—The Ligature of Large Venous Trunks. (*Philad. Med. Times*, July 1, 1882.)
3. KINLOCH.—Aneurism of the Anterior Tibial Artery. (*Amer. Jour. of Med. Sciences*, July 1882.)
4. BÖCKEL.—The Operative Treatment of Genu Valgum. (*Revue de Chir.*, No. 6, 1882.)
5. GRÜNBERG.—A Case of Obturator Hernia. (*Deuts. Zeitschrift für Chirurgie*, Band xvii, Heft 1 and 2.)
6. MURDOCK.—Removal of Plaster-of-Paris Bandages. (*Nashville Jour. of Med. and Surg.*)
7. LEVIS and MOORE.—The Treatment of Transverse Fracture of the Patella. (*Med. Bulletin*.)
8. WEIST.—Foreign Bodies in the Air-Passages. (*Boston Med. and Surg. Jour.*, No. 24, 1882.)
9. LIDELL.—Fractures of the Skull Restricted to the Inner Table. (*Amer. Jour. of Med. Sciences*, April.)
10. JOHNSON, C.—Skin-Grafting. (*International Surg.*, vol. i.)
11. BRICHETTI.—On the Indications for Nephrectomy. (*Gazz. degli Ospitali*, Aug. 9.)
12. VIZIOLI and BUTERA.—On the Value of Cold in Aneurism. (*Gazz. degli Ospitali*, June 1882; and *Gazz. Medica Ital. Prov. Venete*, July 29, 1882.)
13. NICOLAYSEN.—Resection of the Pylorus for Cancer. (*Nord. Med. Arkiv*, vol. xiii; and *Med.-Chir. Rundsk.*)

1. *Lesser on the Operative Treatment of Caseating Glandular Swellings*.—Dr. L. von Lesser of Leipzig, in an original contribution to the *Centralbl. für Chir.*, No. 22, 1882, on the treatment of enlarged and caseating lymph-glands, states that, in consequence of the unsatisfactory results in such cases of external applications, and, also, of parenchymatous injections of Fowler's solution, and of solutions of carbolic acid, he was led to remove such swellings with the knife. In a large series of cases, and in many regions of the body, but particularly in the neck and about the lower jaw, masses of swollen lymph-glands were so completely removed, that no remaining diseased glands could be seen in the wound, and the sheath of the large vessels at the seat of operation was often freely exposed. Notwithstanding the extent of the wound in many of the cases that were thus treated, the healing generally took an aseptic course, and there was not any necessity in most instances for the patient to keep to his bed. In the majority of these cases a permanent cure was attained; that is to say, the cicatrix of the wound remained sound, and no fresh glandular swellings formed around the seat of operation. The general condition of the patient, in each of these favourable cases, improved in a remarkable manner. In other cases, on the other hand, the cicatrix lasted but for a short time. It remained red and swollen, and, after a short interval from the date of operation, usually about three weeks, it broke open, and gave exit to a discharge from the wound of caseous material. Such a result was observed even in those

cases in which, during the extirpation of the diseased glands, no portion of the caseous material itself was allowed to come into contact with the surface of the wound, the diseased glands having been removed *in toto* without any preliminary disturbance of the cheesy deposit. In these cases of fistulous condition of the wound, a decided cure was not effected until after repeated removal, by scraping, of the renewed cheesy deposit. In a third set of these cases of extirpation, the wound healed, and its cicatrix afterwards remained sound, but about the wound a fresh mass of swollen and diseased glands was speedily formed. Dr. Lesser had recently an opportunity of observing a case in which, after an injection of a 5 per cent. solution of carbolic acid into an enlarged and degenerated suboccipital gland, the skin over the gland became perforated, and the caseous deposit was discharged through this orifice, as in a case of spontaneous elimination. In this instance, there was speedy healing, with the formation of a small round and smooth scar. This result led Dr. Lesser to try subcutaneous 'scooping out' of the caseating glandular swelling, instead of resorting to extirpation. In this plan of treatment, the superficial caseating gland is fixed between two fingers of the operator's left hand, and a sharp and narrow knife is then thrust through the skin into the diseased glandular structure. Through the small wound thus formed, a small sharp spoon is introduced into the gland, and the caseating mass is broken down, and afterwards removed, partly by the use of the spoon, partly by being pressed out through the small wound in the skin. The broken-down substance of several glands may thus be removed through one opening. But very little bleeding, it is asserted, occurs during this operation, and Dr. Lesser has never observed any resultant effusion of blood beneath the skin. It was at first feared that in this plan of treatment further infection might be set up through the presence of remaining portions of caseous material in the subcutaneous and circumglandular connective tissue. It is stated, however, that no indications of either general or local infection were observed in any of the cases in which Dr. Lesser applied this treatment. Unless the operation be carried out with attention to the details of the antiseptic method, with disinfected hands and instruments, the use of the spray, and the subsequent application of antiseptic dressings, it is liable to be followed by circumglandular phlegmon. It is not considered necessary to administer an anæsthetic during the operation, except to children and feeble subjects, and when several punctures have to be made at the same sitting. In dealing thus with glands that are quite superficial, a light antiseptic dressing is all that is needed during the after-treatment; but, when the sharp spoon has been passed deeply into the tissues, a small drainage-tube, it is recommended, should be passed through the opening in the skin, and be retained during the first three or four days. Dr. Lesser holds that this method of scooping away caseous lymph-glands is preferable to extirpation. It is a much less severe treatment, and need not prevent the patient from continuing his occupation. The disfigurement is considerably less. There is certainly this objection to the 'scooping out' plan, that, as all the glands at the seat of operation cannot be seen, some glands that are diseased may remain undisturbed. But, as is well known, complete extirpation of a mass of diseased glands does not protect the patient against future swelling of neighbouring glands, or caseous infiltration of the wound.

2. *Pilcher on the Ligature of Large Venous*

Trunks.—In the *Phil. Med. Times*, July 1, 1882, Dr. L. S. Pilcher of Brooklyn details three cases in which it was necessary to interfere with large veins during surgical operation. In the first case, during the removal of a large adenoma of the neck, the internal jugular vein was denuded in the middle of the neck over a space of one inch and a half, and three veins of considerable size in the mastoid region required ligation. No special antiseptic measures were applied in this case. The patient made a rapid and complete recovery, without any symptom indicating disturbance of the internal jugular vein. In the second case, the axillary vein was wounded during the removal of some carcinomatous glands from the armpit. The injured vein was at once tied above and below the wound with silk thread, the operation not having been done antiseptically. The patient when last seen, more than a year after this operation, was in apparent good health; but, although there were not any signs of recurrence of carcinoma, the arm of the affected side was affected with persistent œdema. The third case was one of suicidal wound of the internal jugular vein. The bleeding was arrested by hæmostatic forceps, which were allowed to remain for two days in order to produce permanent obliteration of the wound in the vein. The patient made a perfect recovery. Dr. Pilcher has been led to the conclusion that it is not the simple exposure of a vein which causes in any case phlebitis and thrombosis. A study of the pathology of phlebitis, it is pointed out, indicates that the cause of the occurrence of inflammation and thrombosis in denuded veins is either, and most frequently, the extension to them of inflammation from the tissues by which they are surrounded, or the violence to which their external cellular tissue has been exposed; a primary external inflammation thus being required as the necessary antecedent of the affection by extension to the inner vascular tunics. If the character of an operation and of the after-treatment of the wound be such as to make possible primary union of the raw surfaces; if no undue violence have been done to the denuded vein in the course of the operation, no fear need be entertained of the development of phlebitis. If, however, such favourable conditions cannot be secured, and the vein be placed at the bottom of a suppurating wound, or, in the course of the operation, have suffered much contusion, the probabilities of the development of disastrous phlebitis are great. The question of the ligature of a large vein is not influenced by any risks of serious interference with the return of blood to the heart. The great venous trunks are freely supplemented by collateral channels; so that, as has been abundantly demonstrated by many cases, ligature even of the internal jugular vein is not likely to be attended by any permanent inconvenience to the cerebral circulation. The chief dangers to be apprehended from the application of ligatures to veins are inflammatory in character. In the vast majority of cases this inflammation is simple and circumscribed, and there is no special vulnerability in the venous tissues. When diffused periphlebitis does occur, it is to be attributed to the general constitutional conditions of the particular patient. It follows then, Dr. Pilcher goes on to state, that since, in general, little fear is to be apprehended of disastrous inflammatory complications following the application of a ligature to a vein, it would be better, in those cases in which in the course of an operation a vein has suffered much contusion, or if its continued exposure at the bottom of a suppurating wound be unavoidable, that the vein should be excised

rather than be left to the more imminent danger of thrombosis. Dangers from the use of the ligature, it is asserted, are too remote to cause any hesitation in its employment, or to be permitted to embarrass the needed thoroughness in the removal of any growth. To lessen the disadvantages and possible dangers of the continuous irritation set up by the silken ligature, Dr. Pilcher advocates the substitution of pressure-forceps. Experience, he states, has demonstrated that the continuous application of these, for from two to four days, is sufficient to secure the permanent sealing of even large venous trunks. There will be but few conditions, Dr. Pilcher thinks, in which for the arrest of hæmorrhage from veins, the use of such forceps will not be found superior to that of the ordinary ligature; they produce less local irritation, no ulceration, and division of constricted tissues, and their application is for a very much shorter period of time. Dr. Pilcher holds that, by the use of carbolised animal ligatures, and with proper antiseptic precautions in operating, all irritation and inflammation might be prevented in the ligature of a vein, and the primary union of wounds secured. Some experiments, recently made by Dr. Pilcher and Dr. George R. Fowler, point to these conclusions: that repair in the case of veins that have been tied with antiseptic catgut is secured, first, by the absorption of that part of the inner coat compressed by the ligature; secondly, by the fusion or organic union of the opposed middle tunics; thirdly, by the incorporation into the outer tunic of the substance of the ligature: that this repair is perfect without the intervention of any clot; that a thrombus in the *cul-de-sac* of the vein is not always present: and, finally, that throughout the whole process there is no inflammation either of the vein or of its investing connective tissue.

3. *Kinloch on Aneurism of the Posterior Tibial Artery*.—Dr. R. A. Kinloch of Charleston puts on record, in the *American Journal of the Medical Sciences*, July 1882, a case of supposed spontaneous aneurism of the left posterior tibial artery in a male patient, aged 45. At the back of the left leg was a large swelling, which had commenced, without known provocation, about three years before the case came under the notice of Dr. Kinloch. This swelling was semi-solid, indistinctly fluctuating to the touch, and was not influenced by the interruption of the flow of blood through the femoral artery. There was no pulsation; but, when the palms of the hands were made to bear firmly upon a large extent of surface at about the region of the greatest circumference of the limb, a slight upheaving, or rather an excentric movement of the mass, was recognised, which was not perceived when the flow through the femoral was cut off by pressure at the groin. No *bruit* could be made out. The author diagnosed an aneurism most probably of the posterior tibial artery, or possibly of the lower portion of the popliteal, which had recently become diffused or false, and the sac of which was filled with fibrin and coagula. Doubts were entertained by others as to the correctness of this diagnosis, and opinions varied as to the existence of an encéphaloid or sarcomatous growth, or a pulsating tumour of bone. The femoral artery was tied with very little permanent benefit and relief to the tension of the tumour, save some subsidence of œdema of the leg. One month later an incision was made into the swelling, and then, in consequence of the serious hæmorrhage which at once resulted, amputation was performed just above the knee. On dissection of the removed limb, the case proved to be one of

aneurism of the posterior tibial, about two inches below its origin. The artery was pervious both above and below the opening into the sac. It had been fed by collateral vessels entering the femoral, below the point of ligature. At the end of his article Dr. Kinloch records all the cases of spontaneous aneurism of the posterior tibial artery he has been able to find in surgical literature. The term *spontaneous* he uses simply to imply that, in the cases reported, there is a want of reasonable proof of origin from injury. The fact is recognised that, upon a close investigation of the history of all the admitted spontaneous or true aneurisms of the larger arteries, there is frequently found attached to this some antecedent blow or some undue exertion. Dr. Kinloch doubts whether, in the strictest pathological sense, there is ever a spontaneous aneurism of the posterior tibial. Deligation, though deemed worthy of trial, was not regarded as a very promising measure. The double ligature to the posterior tibial itself would, it is acknowledged, have been the most thoroughly surgical operation, but in the state of the limb this could hardly have been accomplished, and most certainly not without opening the sac. It is held that there would not have been any cure in this case if the sac had not been interfered with, as the full establishing of the collateral circulation would have brought on renewed trouble and progressive disease. The dissection proved that the artery was pervious above and below the sac, and that it received an abundant supply of blood.

4. *Bœckel on the Operative Treatment of Genu Valgum*.—In a section of a memoir on osteotomy (*Revue de Chir.*, No. 6, 1882), M. Jules Bœckel of Strasbourg deals with the subject of the treatment of genu valgum. In adult subjects this affection, it is held, may be best treated by osteotomy. Attempts to straighten the distorted limb by manipulation, or the use of orthopædic appliances, are liable to result in failure, and may cause serious complications, as arthritis, injury to the popliteal nerves, and rupture of the external lateral ligament. The author, rejecting the intra-articular operations of Ogston and Reeves, thinks that Macewen's proceeding is preferable to others. After this, he would rank linear osteotomy of the tibia, an operation from which useful results may be obtained in cases that are not very severe. This operation is more simple and much less serious than that of Macewen. The portion of bone to be divided is more superficial, injury to the articulation is impossible, and there is no risk of hæmorrhage. It is, however, seldom applicable, as the femur is much more frequently in fault than the tibia. Cuneiform osteotomy, though with antiseptic precautions almost quite free from danger, ought to be reserved for cases that are quite exceptional. The author is of opinion that in osteotomy the section of the bone should be complete, and he objects to the practice of cutting through about two-thirds of the thickness of the bone, and breaking down the remaining portion. Splintering of the bone, it is stated, is apt to be thus produced, and the fragments may necrose, and give rise to complications that might have been readily avoided by complete section. In dividing the bone, M. Bœckel uses two chisels, a large one for the more superficial parts, and one of less size for going through the remaining thickness of the osseous cylinder. He thinks it advisable not to stitch up the wound in the soft parts, notwithstanding the success that has been obtained by M. Beauregard from the practice of completely occluding the wound. It is considered risky to close a wound completely after

osteotomy. It is held that, when sutures are applied, drainage is necessary and indispensable. When the wound is not closed by sutures, a drainage-tube may be dispensed with.

5. *Grünberg on a Case of Obturator Hernia.*—The subject of this case, reported by Dr. Grünberg of Stralsund (*Deutsche Zeitschrift für Chirurgie*, Band xvii, Heft 1 and 2), was a woman aged sixty-five, who, during the three days before she came under observation, had suffered from well-marked and very intense symptoms of intestinal strangulation. No swelling could be made out at any of the usual seats of hernia, but on close examination it was found that pressure just below the left groin and over the pectineus muscle caused great pain. A vertical incision, about three inches in length, commencing just below the horizontal ramus of the os pubis, was carried downwards, at a distance of an inch and a quarter from the outer border of the adductor longus. On exposure of the surface of the pectineus, no swelling nor abnormality was observed; but on raising the outer margin of this muscle, and drawing it inwards, a hernial tumour of the size of a large hazel nut was revealed. After incision of the wall of the sac on a director, a small loop of intestine came to view, which though very lightly constricted, and of a dark blue colour, presented a smooth and shining surface, and had evidently not become gangrenous. For fear of wounding the obturator artery, the pulsations of which could be felt by the finger, the knife was not used for overcoming the stricture. The orifice constricting the neck of the hernia was dilated by the fore-finger being carried along the outer and lower portion of its circumference, and also by breaking down some of the fibres of the obturator membrane. All the symptoms of strangulation ceased immediately after the operation, and on the eighteenth day the patient, though feeble, was regarded as cured. Two days later, however, according to a postscript to this report, she died suddenly with symptoms of collapse, in consequence of perforation of intestine. Dr. Grünberg states that it is not clear to him why almost all the writers on obturator hernia have reported its diagnosis as being very difficult. He holds that the diagnosis of a strangulated obturator hernia is not more difficult than that of a strangulated femoral hernia. No tumour, it is true, is to be seen or felt, but then there is always characteristic pain. In some instances there is lancinating pain caused by pressure on the obturator nerve. In Dr. Grünberg's case any attempt at active flexion of the thigh excited very intense pain, and the patient complained of constant painful and pricking sensations extending down the inner side of the thigh. This pain, due to pressure on the nerve, however, is not always felt in cases of obturator hernia, and is frequently complained of by the subjects of uterine disease, and also by hysterical women. The characteristic pain of strangulated obturator hernia, and that by which the diagnosis may be readily and surely established, is the tenderness complained of when pressure is made over the pectineus muscle. This tenderness, the region of which is very limited in extent, is so intense that the patient screams when it is excited, and, if under the influence of an anæsthetic shrinks on pressure over this tender part. When this characteristic pain over the locality of the obturator canal can be made out in association with symptoms of intestinal strangulation, Dr. Grünberg holds that one may safely diagnose obturator hernia. On the other hand, in absence of such pain he would decide with equal

confidence against the existence of this affection. Notwithstanding the success that attended non-operative treatment in the well-known case reported by Roser in 1845, Dr. Grünberg would not expect much from the taxis in any case of strangulated obturator hernia; the hernial tumour is so very small, and reflex contraction of the surrounding muscles is so liable to be set up on manipulation. If not strangulated, the hernia might return spontaneously under the influence of alternating natural contraction and relaxation of the adductors and flexors of the thigh. The operation for relief of the hernia, when strangulated, if performed early, is free from danger. Dr. Grünberg recommends that in order to avoid bleeding from the muscular vessels, the pectineus, instead of being partially divided, should be raised, and then dragged inwards by blunt hooks. Should the hernial tumour be large, so as to necessitate division of the muscle, it is recommended that it be separated at its origin from the ramus of the pubis by the use of a tenotome. The constriction, it is held, may usually be overcome by passing the tip of the fore-finger with a gentle boring movement between the neck of the sac and the membranous portion of the constricting ring, dilatation being effected partly through yielding of the obturator membrane, and partly through the tearing of some of its fibres. Hæmorrhage from the obturator artery will thus be avoided. If the superficial incision be made according to Dr. Grünberg's directions, there is no danger, he says, of wounding the internal saphenous vein. The incision he recommends is one about three inches in length, commencing just below the horizontal ramus of the pubis, at a point about one inch and a quarter to the outer side of the origin of the stretched adductor longus, and carried directly downwards over the outer margin of the pectineus. W. JOHNSON SMITH.

6. *Murdoch on the Removal of Plaster-of-Paris Bandages.*—Dr. F. H. Murdoch of Bradford, Pennsylvania, says (*Nashville Jour. of Med. and Surg.*) that a very convenient way to remove a plaster-of-Paris bandage is as follows. Take a strong solution of nitric acid, and, by means of a camel-hair pencil, paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster, that it may be readily divided by means of an ordinary jack-knife.

7. *Levis and Morton on the Treatment of Transverse Fracture of the Patella.*—At the recent meeting of the American Surgical Association, Dr. R. J. Levis read a paper on fracture of the patella (*Med. Bull.*, July). He first called attention to the fact that, the patella not being a symmetrical bone, it was hard to make any well-fitting appliance to it. Then, again, as it has no natural depressions to which to apply force, the application of such force creates unnatural depressions. Thus, pressure upon the angular edges above and below tends to cant the fragment upwards; and, even if it could bring the lower edges of the fracture together, it would separate the upper edges. The result of ligamentous union is apt to be lameness, inability to use, and mistrust of, the injured leg. Bony union is very rare. It has been doubted if it ever occurs. With the ordinary apparatus he did not believe it could be secured. But he and Dr. Morton had for some years been using a modification of Malgaigne's hooks, with which he believed he had secured it. His own modification consisted in separating the hooks of one side from those of the other, so that they can be inserted first on one side of the fragments and then on the other. He then showed two patients who had been

treated in this way, in whom no motion could be made between the former fragments, and who had complete use of and confidence in their legs. Dr. Thomas G. Morton also read a paper on the same subject. He said that in 1873, after having always used the usual methods with satisfactory results, it occurred to him to try an old pair of Malgaigne's hooks, which had been brought from Europe, upon a patient in the Pennsylvania Hospital. To his pleasure he got what he believed to be bony union. Since then he had used the same and some modifications of them in a number of cases. He showed a pair of hooks which were so constructed that the two upper or two lower could be made to approach or recede from each other. His plan was never to put the hooks on before the fourth day. He first applied lead water and laudanum, elevated the limb, perhaps used gentle compression, until the effusion and swelling were reduced, and then etherised the patient and put in the hooks, applying a splint for twenty-four hours, just to keep the patient still till he became a little used to the hooks. He had seen no good from keeping the hooks in over sixteen or eighteen days. He had never seen any trouble whatever follow the use of them; of course, he would not pretend that this method was applicable to all cases of fracture of the patella. In comminuted fractures, for example, they could not be used. Again, if approximation could be secured by slight pressure of the fingers, there was no need to use the hooks; but when the separation of the fragment was wide, e.g., an inch and a half to two inches, then they might be used with advantage.

8. *Weist on Foreign Bodies in the Air-Passages.*

—At the recent meeting of the American Surgical Association (*Boston Med. and Surg. Jour.*, No. 24), Dr. J. R. Weist read a paper on this subject. The conclusions, which are said to have been based on above 1,000 cases, were as follows. 1. When a foreign body is lodged either in the larynx, trachea, or bronchi, the use of emetics, errhines, or similar means should not be employed, as they increase the sufferings of the patient, and do not increase his chances of recovery. 2. Inversion of the body and succussion are dangerous, and should not be practised unless the wind-pipe have been previously opened. 3. The presence simply of a foreign body in the larynx, trachea, or bronchi, does not make bronchotomy necessary. 4. While a foreign body causes no dangerous symptoms, bronchotomy should not be performed. 5. While a foreign body remains fixed in the trachea or bronchi, as a general rule bronchotomy should not be practised. 6. When symptoms of suffocation are present, or occur at frequent intervals, bronchotomy should be resorted to without delay. 7. When the foreign body is lodged in the larynx, there being no paroxysms or strangulation, but an increasing difficulty of respiration, from oedema or inflammation, bronchotomy is demanded. 8. When the body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

9. *Lidell on Fractures of the Skull, restricted to the Inner Table.*—In the American edition of *Holmes's Surgery*, Dr. John A. Lidell had occasion to show that cranial fractures are restricted to the inner table much oftener than has generally been supposed. Researches made for other purposes since that was written have brought to his notice fresh evidence, not only that his views were correct, but also that this lesion occurs with even a greater frequency than he had believed, and that it unquestionably should be assigned a prominent place among the traumatic

lesions of the skull, which, although not very infrequent, are very obscure or little understood, and nearly always fatal, unless promptly treated when symptoms appear. In the *American Journal of the Medical Sciences* for April 1882, Dr. Lidell presents some additional cases, together with a thorough exposition of the subject, and especially of the symptoms, diagnosis, and treatment. As regards the mode of production of this variety of fracture, he shows that, when the skull is broken by a blow of any sort, except at the frontal or any other sinus, the fracture always commences in the side of the skull opposite to that which is struck, and the blow, in whatever way produced, must not be strong enough to break both tables. As to the termination of cranial fractures restricted to the inner table, the clinical histories of the cases Dr. Lidell has collected show that the traumatic meningitis and encephalitis usually end in speedy death, unless the causes thereof, the imprisoned fragments of the inner table, are liberated and removed by the timely performance of trephining.

10. *Johnson on Skin-grafting.*—Dr. C. Johnson writes as follows on this subject in *International Surgery*, vol. i, p. 549. 1. It affords an admirable means of accelerating and facilitating cicatrisation. 2. The pellicle produced by its aid is less prone to contraction, and contracts less than an ordinary cicatrix. 3. The deeper layers of the epidermic elements are the chief factors of growth. 4. The growing cicatrix is formed at the expense of the embryonic cells of the granulating surface, stimulated into activity by the presence of the living cells of the graft. 5. The stimulus first showing energy in and about central islands of new growth, induces activity at the hitherto dormant margin of the ulcer. 6. Grafts may retain vitality, and be effective, long after separation from the body. 7. Small grafts of the size of a millet-seed, for example, are generally preferable to larger ones, although much larger grafts have had their successes and advocates. 8. Grafts should be obtained from the patient himself, if possible, but in all cases the danger of specific inoculation ought to be present in the mind of the surgeon who borrows grafts from one subject for application upon another, or who practices heteroplasty. 9. Grafts furnished by the aged are less disposed to adhere than those obtained from the young, and sometimes fail entirely. 10. Grafts obtained from one race of men may be successfully used on individuals of another race; and animal grafts may be transplanted upon human beings and provoke cicatrisation. 11. Foul surfaces, or those of persons in bad health, will refuse to accept good grafts; but with improvement or establishment of the health of the individual bearing an ulcer, and the appearance of healthy granulations, a favorable result of skin-grafting may be anticipated. Finally, the great benefits accruing from successful skin-grafting far outweigh its drawbacks, which are, the pain of the operation, and, unless amputated limbs be utilised, the consecutive pain in the parts yielding the grafts, whether these be autoplasic or heteroplasic.

11. *Brichetti on the Indications for Nephrectomy.*—Dr. Luigi Brichetti (*Gaz. degli Ospitali*, Aug. 9) thus sums up what he considers the chief indications for nephrectomy: 1. Certain wounds of one or both kidneys; 2. Movable kidney, complicated with neuralgia; 3. Tumours of the kidney, hydro-, or pyonephrosis; 4. Renal calculi; 5. Parasites; 6. Certain affections of the ureters. In the majority of cases of pyonephritis, the author, however, would prefer large incisions into the organ, kept open with drain-

age-tubes, rather than its removal, especially after gunshot wounds.

12. *Vizioli and Butera on the Value of Cold in Aneurism.*—Drs. Vizioli and Butera have lately laid before the Medico-Chirurgical Academy of Naples the results of a series of experiments instituted by them to test the value of cold in the treatment of aneurism (*Gaz. Med. Ital. Prov. Venete*, July 2, 1882). They conclude from these that cold has little influence on the course of an aneurism, while, as a method of treatment, it is not free from many drawbacks. Its local action is not to produce, as might be supposed, a lowering of temperature sufficient to cause rigidity or condensation of the tissues, nor does it exercise any coagulating power on the blood itself. Its effect is to produce increased activity of the collateral circulation and arterial pressure, both which conditions are adverse to consolidation within the sac. The application of ice should, therefore, be abandoned as a means of treatment, both in thoracic aneurisms, and also in those of other arteries, where ligature or compression are much more radical and hopeful methods.

LITTON FORBES.

13. *Nicolaysen on Resection of the Pylorus for Cancer.*—Dr. Nicolaysen of Christiania describes (*Nord. Med. Arkiv*, Band xiii; and *Med. Chir. Rund.*) the first performance in Scandinavia of the operation of resection of the pylorus for carcinoma. The operation was done in March 1881, by Professor Nicolaysen, in the Imperial Hospital at Christiania, the patient being a woman, aged 37, who had suffered for nine months from constantly increasing symptoms of constriction of the pylorus, and had become reduced to a state of extreme emaciation and weakness. The operation was performed under chloroform, the stomach having been previously washed out with a 2 per cent. solution of boracic acid. An oblique incision, 10 centimètres in length, was made parallel to the margin of the ribs on the right side, and the tumour, which was found to be free from adhesions, drawn through it. The growth measured 9 centimètres in length, and 10 centimètres in circumference at the pylorus, increasing to 23 centimètres as it approached the stomach. In the great omentum were several hard and swollen glands, situated a few centimètres from the main growth. This infiltrated part of omentum was then secured by a row of double ligatures, and cut through, the corresponding part of the lesser omentum being treated in a similar manner; the larger visible vessels were then secured by ligature, and the growth was removed by cutting through the stomach about 1 centimètre from the margin of the affected part. Six large double stitches were then passed through the cut edge of the duodenum, after thorough cleansing from mucus and remains of food, and the intestine was held well out of the way by means of them. The large wound in the stomach was then dealt with, the edges being turned inwards, and so secured by catgut stitches that the peritoneal surfaces were brought into contact, the stitches being passed only through the serous and muscular coats. One part of the wound was left open, and to it the cut end of the duodenum, its edges invaginated in like manner, was then secured. After thorough cleansing, the stomach was returned to the abdominal cavity, and the external wound closed by deep and superficial sutures, and dressed in Lister's method. The operation was followed by very slight epigastric pain, rapidly passing off, but the weakness was extreme, and, becoming collapsed, the patient

died fifteen hours afterwards. The necropsy revealed no other cause of death, the stitches were firmly secured, requiring considerable force to separate them, and the peritoneal surface was free from any appearance of inflammation. The extremely enfeebled state of the patient being borne in mind, the fatal issue of this case cannot be reasonably cited as an argument against the operation itself. That protests from certain quarters should have been made is not by any means surprising when one considers how, only one generation ago, the operation of ovariectomy was not only protested against, but, by many, roundly condemned. With respect to the details of the operation itself, this case serves to point out the advantages of the use of carbolised silk ligatures instead of catgut. In the first place, the use of catgut of necessity lengthens the time of the operation, a fact which may materially affect the prognosis; and secondly, the possibility of rapid solution of the catgut may be a source of danger in case any extraordinary strain be put upon a stitch which has become weakened in this manner.

E. CLIFFORD BEALE.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BRAUN, GUSTAV.—Contributions to the Operative Treatment of Tumours of the Female Genital Organs. (*Wiener Med. Woch.*, No. 15, 1882.)
2. BREUS.—The Therapeutics of Puerperal Eclampsia. (*Archiv für Gynäkol.*, Band xix, Heft 2.)
3. DANILLO, S.—Clinical Researches as to the frequency of Diseases of the Sexual Organs in Insane Women. (*Deutsche Med. Zeitung*, 1882, No. 18.)
4. DÜVELIUS.—A Case of Extirpation Uteri Prolapsi Vaginalis. (*Centralbl. für Gynäkol.*, Aug. 1882.)
5. FISSIAUX.—On the Treatment of Urethritis in the Female by Local and Permanent Applications of Coal-Tar Soap. (*Ann. de Gynéc.*, Aug. 1882.)
6. HUCHARD, H.—Hepatic and Nephritic Colic during Pregnancy and Labour. (*Jour. de Méd. de Paris*, Aug. 26, 1882.)
7. LUTAUD, A.—Note on Membranous Dysmenorrhœa. (*Ann. de Gynéc.*, Aug. 1882.)
8. MACAN, A. V.—The Rational Treatment of Anterior and Posterior Displacements of the Uterus. (*Dublin Jour. of Med. Science*, July 1882.)
9. METTENHEIMER, C.—A Case of Mycosis of the Female Genital Organs. (*Memorabilien*, No. 1, 1882.)
10. MÜLLER, P.—Modern Cæsarean Section. (Berlin: August Hirschwald, 1882.)
11. NICOLINI, G. B.—A Successful Case of Porro's Operation. (Milan, 1881.)
12. PROCHOWNIK.—Contraction of the Pelvis. (*Centralbl. für Gynäkol.*, 29 July 1882.)
13. ROKITSANSKY.—Epithelial Carcinoma of the Clitoris. (*Ibid.*)
14. SAVAGE.—On a Successful Case of Porro's Operation. (*Brit. Med. Jour.*, Sept. 2nd, 1882.)
15. SINCLAIR, A. D.—Measurements of the Uterine Cavity in Childbed. (*American Gynecol. Trans.*, vol. vi, 1882.)
16. SLOAN, SAMUEL.—On Oil of Eucalyptus in Midwifery Practice. (*Lancet*, Sept. 2, 1882.)
17. TCHUDORSKY, V. A.—On Technics of Decapitation. (*Vratch*, 1882, No. 7, pp. 98-100.)
18. SCHRAMM.—A Case of Retention of Fœtal Bones in the Uterine Cavity during One Year and Seven Months. (*Mediz. Oboz.*, Jan. 1882, pp. 133-4.)

3. *Danillo on the Frequency of Disease of the Sexual Organs in Insane Women.*—Dr. Danillo examined 200 insane women, and found that 162, or 80 per cent., were suffering from various diseases of the sexual organs. Out of 140 menstruating women, between 15 and 42 years of age, only 20 were without some uterine anomaly. Out of 60 women who had ceased menstruating, between 42 and 75 years of age, 18 were the subjects of some affection of the genital organs. Acute and chronic endometritis and metritis were most frequently observed; less frequently displacement of the uterus, dysmenorrhœa, acute and chronic ovaritis, and other diseases. The above results show that the complication of psychosis with uterine disease is a frequent occurrence, and of the greatest clinical interest.

5. *Fissiaux on the Treatment of Urethritis in the Female.*—Dr. Fissiaux relates fifteen cases, in which Dr. Leblond treated blennorrhagic urethritis in the St. Lazare Hospital in the following way. A short stilette is wrapped round with cotton-wool, covered with coal-tar soap; this is passed into the urethra and retained there. It is renewed every other day. During micturition, the patient prevents it from falling out by pressing it with her finger. The rationale of the treatment is that the tampon separates the folds of the urethra from each other, and thus keeps the whole surface of the mucous membrane at rest and in contact with the medicament.

7. *Lutaud on Membranous Dysmenorrhœa.*—Dr. Lutaud, after mentioning two cases in which he saw membranous dysmenorrhœa, states that he believes: 1. that membranous dysmenorrhœa consists in an exfoliation of the hypertrophied mucous membrane; 2. that expulsion of the mucous membrane does not occur at each menstrual epoch, but there is frequently an interval of several months between each attack; 3. the disease is common in virgins, and is not the result of conception; 4. that membranous dysmenorrhœa is nearly always accompanied by sterility.

8. *Macan on the Rational Treatment of Displacements of the Uterus.*—Dr. Macan, after a critical survey of the accepted theories as to uterine displacements, concludes as follows. The normal position of the uterus, when the bladder is empty, is one of ante flexion. Hence, mechanical treatment of ante flexion is rarely called for, and, if symptoms be present, our efforts should generally be directed to the cure of the complications. In retroflexions or versions, the primary indication is to treat the displacement. In order to do this effectually, we should place the uterus in a position of exaggerated ante version, and then fix the cervix posteriorly by a pessary. Hodge's pessary, or any other pessary used for the cure of retroflexion, when uncomplicated with adhesions, should act by fixing the cervix posteriorly, and not by pressing against the fundus and elevating it. Versions are, so far, more serious than flexions, in that they are caused by rigidity of the uterine parenchyma, which is generally due to chronic metritis. To make the results of the bimanual examination of any use for comparison with the results of other observers, it must be made in the dorsal position, the bladder having been previously emptied. A great deal of the confusion that exists about the treatment of anterior and posterior displacements originates in its being taken for granted that any treatment that is found suited to an anterior displacement, must be equally suited to a posterior one, and *vice versa*. Dr. Macan has not entered into the consideration of posterior displacements when complicated with fixation of the fundus

in the above paper. [Dr. Macan's theory of fixing the cervix by putting the posterior *cul-de-sac* on the stretch appears untenable, inasmuch as all the pelvic organs are continuously moving with each inspiration and expiration.—*Rep.*]

11. *Nicolini on a Successful Case of Porro's Operation.*—Dr. Nicolini, after relating a case in which he performed Porro's operation with success to mother and child, states that the proposal of Professor Malachia De Christoforis, to abolish the supravaginal amputation of the uterus after the Cæsarean section, and to substitute for it the total extirpation of the uterus by the Freund-Kochs method, is unwise. He thinks that De Christoforis exaggerates the danger from suppuration of the pedicle. Dr. Nicolini thinks the difficulties of removing the whole uterus, after Cæsarean section, far outweigh any inconvenience in treating the uterine pedicle. He also disapproves of Müller's modification of extracting the uterus through the abdominal wound previously to incising it. He considers the operation of Porro more simple, and safer to the patient than either of the above modifications.

14. *Savage on a Successful Case of Porro's Operation.*—Dr. Savage was called by Dr. Clement Dukes of Rugby to a lady aged 25. She had been almost constantly vomiting for some days. There was a very hard tumour, reaching to the umbilicus. The cervix felt a little soft and open. The diagnosis was that it might be an extra-uterine gestation, a myoma, or an ovarian tumour with the addition of intra-uterine gestation. An incision, nine inches long, was made through the abdominal wall. The tumour was found to be a large solid fibro-myoma. The cavity of the uterus was found to contain a fœtus, and was pushed upwards and to the left. The right ovary and Fallopian tube were in front of the tumour, and almost black from compression between it and the abdominal wall. The whole mass was removed, the stump was secured by a wire clamp, and its serous outer surface was attached by silk to the abdominal wound. Two thick silk ligatures were also tied round the stump for security. A glass drainage-tube was inserted just above the stump, which was mopped over with perchloride of iron. After the operation, which lasted about an hour and a half, the finger passed into the vagina detected the cervix high up, but otherwise normal, showing that the wire had encircled the uterus at or about the level of the inner os, and had not included any of the vaginal roof, with danger to the uterus. The mass removed weighed nearly nine pounds, and contained the fœtus with membranes intact. The patient completely recovered under the care of Dr. Clement Dukes. The breasts secreted milk on the fourth day. The clamp came away on the twenty-first day. Dr. Savage states that, as far he knows, this is the second time that Porro's operation has been successfully performed in this country. He is of opinion that the extraperitoneal is the best method of dealing with the stump. [This case hardly comes within the category of Porro's operation. As we understand it, Porro's operation implies Cæsarean section, at term or late in pregnancy, followed by amputation of the uterus and its appendages through the cervix uteri, and undertaken because delivery cannot safely be effected *per vias naturales*. Certainly this is what Porro himself initiated. If, however, the removal of a fibroid tumour of the uterus, undertaken independently of a possible pregnancy, or in ignorance of the existence of one, complicated by early pregnancy, is to be classified as a Porro's operation, then

Dr. Savage is by no means the first to have performed that operation in this country. On Jan. 7th, 1877, Dr. Robert Barnes, assisted by Dr. Braxton Hicks and Dr. Fancourt Barnes, removed a large fibroid uterus, part of which had become wedged under the sacrum, and was causing such distress that an operation was necessary. When the tumour was removed, the pelvic portion was found to be gangrenous. On opening the mass of the tumour, a two-and-a-half months' fœtus was discovered in the uterine cavity. We did not, however, on that account regard the operation as one after Porro. The uterus is in St. George's Hospital Museum, with the contained ovum. It is figured p. 792 in Barnes's *Diseases of Women*, 2nd edition.—*Rep.*

16. *Sloan on Oil of Eucalyptus in Midwifery Practice.*—Dr. Sloan objects to carbolic acid as an uterine disinfectant, that it cannot be used continuously; as, 1. in the quantities required it would be poisonous; 2. It would cause severe irritation, and thus prevent the healing of lacerations; 3. It would coagulate the lochial discharge, causing its retention even within the uterus; 4. To many patients it has a decidedly sickening odour. When Mr. Lister, in May 1881, recommended oil of eucalyptus as a substitute for carbolic acid where the latter was inadmissible, it occurred to Dr. Sloan that this substitute might be employed more extensively in midwifery practice than had been considered safe with carbolic acid. Since then, Dr. Sloan has put it to the test, and has found its advantages to be the following. 1. It is non-poisonous; 2. In the quantity and strength required it is unirritating; 3. It does not coagulate the lochia, which, by separating the lips of the vulva, can be seen to flow out in a liquid stream; 4. Its odour is, with rare exceptions, a pleasant one; 5. It seems to act as an uterine stimulant, causing and assisting to maintain uterine contraction. Formed into a pessary of a suitable shape and size, it is easily applied to the neighbourhood of the os and maintained there. To secure this, the pessary must be broad and short, must melt slowly but completely, and must contain a large percentage of the antiseptic oil. These requirements are supplied in the following formula. Take oil of eucalyptus, six drachms; white wax, four drachms; cacao butter, four drachms. Mix, and divide into twelve pessaries. One of these must be applied night and morning, immediately after the usual sponging; and, though the napkins are frequently changed, the odour will be quite perceptible on the one removed prior to the next sponging twelve hours later. Though uncertain as to the fact of a material absorption of the oil into the system, Dr. Sloan is persuaded that the oil does not remain at the os, but freely passes into the cavity of the uterus. For it is admitted that the uterus, for several days after labour, is in a state of alternate contraction and relaxation; and, whilst during contraction it will empty itself, during relaxation again, whatever is lying at the os, or upper part of the vagina, will be sucked into the vacuum produced. The eucalyptus will, therefore, find its way into the uterine cavity. In hospital practice, Dr. Sloan uses the pessaries in all cases; in private practice, in those cases only requiring special treatment from the first. In one case of pyæmia, the oil of eucalyptus, in the proportion of five minims to twenty minims of olive oil, was used hypodermically every hour. In this case the patient was nearly dying, but rallied under the oil of eucalyptus.

FANCOURT BARNES, M.D.

17. *Tchudovsky on Decapitation.*—Differing from other authors, Dr. Tchudovsky (*Vratch*, 1882, No. 7) considers the death of the child in cases of neglected transverse presentations as an absolute indication for embryotomy, *i.e.*, decapitation. The treatment by podalic turning he advises exclusively in those rare instances in which it may be performed very easily. Looking for the easiest and most convenient method of decapitation, the author repudiates the use of Schultze's sickle-shaped knife (much praised of late by Professor Küstner of Jena) and of Dubois' decapitating scissors, because of their difficult management and 'the danger to the mother, and joins Drs. Pawlik, Schanta, and E. Bidder, in defending Braun's blunt hook. In the use of this, which he regards as the best decapitating instrument, Dr. Tchudovsky recommends the operator to grasp with the hand the integuments of the child's neck, to cut the fold with scissors, to separate the skin as high as possible by means of finger in the wound, and then to introduce Braun's hook, which now very easily passes under the skin, and easily cuts through muscles and spine, after a very few rotatory movements and tractions downwards. To complete the operation, it remains only to divide the integuments by ordinary blunt-pointed scissors. The author claims the following advantages for his subcutaneous method. 1. It greatly diminishes the force required for rotating and dragging the hook downwards. 2. It prevents the instrument from slipping off. 3. It obviates all possibility of injuring the surface of the uterus.

18. *Schramm on a Case of Nineteen Months' Retention of Fœtal Bones in the Uterus.*—Dr. Schramm describes (*Med. Oboz.*, January 1882) the case of a woman aged 32, married twelve years, who had had eight labours, the first four of which had been normal; the last four had come at full term, but the children were born dead. The last labour was very difficult and lasted nearly four days. No *post partum* hæmorrhage followed, but the placenta, as well as all the cranial and some of the vertebral bones of the macerated fœtus, remained in the uterine cavity. Some weeks afterwards, there was an offensive discharge from the vagina, and, four months later, urine. During the last six or seven months, the patient occasionally found small pieces of bone in her vaginal discharge. Having been called to see the patient nineteen months after her last labour, the author found her health deteriorated; there were fever, abdominal pains, constipation, and highly fœtid discharge; the uterus was low down, and the os open, easily admitting a finger. The latter immediately came into contact with several friable bones of various size. The removal of them was accomplished without any difficulties, hæmorrhage being slight. A vesico-uterine fistula existed. The general state of the patient soon began to improve, and the discharge of urine through the vagina considerably lessened. V. IDELSON, M.D.

ANATOMY.

RECENT PAPERS.

1. REIN.—The Fundamental Nervous Plexus of the Uterus. (*Bull. de la Société de Biologie.*)

2. AYRES.—The Development of the Cornea. (*New York Med. Jour. and Obstet. Rev.*, May.)

3. WOLFF.—The Nerves of the Cornea. (*Archiv für Microscop. Anat.*, Band xx, Heft 3.)

4. WOLFF.—Free Endings of Sensory Nerves. (*Ibid.*)
 5. LUCAS.—Hereditary Tendency to the Production of Supernumerary Digits. (*Guy's Hosp. Rep.*, vol. xxv.)

1. *Rein on the Fundamental Nervous Plexus of the Uterus.*—M. Rein of St. Petersburg (*Bulletin de la Société de Biologie*) states that he has specially studied the fundamental plexus of the uterus, because, both physiologically and clinically, an exact knowledge of this plexus is of great importance. His description of the plexus is as follows. 1. The general features of the fundamental plexus of the uterus do not differ from those of other organs composed of non-striated muscles. 2. It is extra-uterine, and is situated principally in the cellular tissue which surrounds the vagina, just where the hypogastric plexus anastomoses with the branches of the sacral nerve. 3. This plexus presents a large number of ganglion-cells. In the plexus of the guinea-pig, these cells constitute more than a hundred ganglia of different dimensions. 4. The ganglia are generally situated on the track of the principal efferent and afferent nerve-bundles of the plexus. There are a certain number of small ganglia also scattered about in the network of the plexus. 5. The hypogastric, sacral, uterine, and vesical ganglia, and also those of the fundamental plexus, can be recognised according to the position they occupy. 6. The uterine ganglionic cells of the guinea-pig and the rabbit are limited above by the horns of the uterus. Inferiorly, the fundamental uterine plexus mixes with the vaginal plexus. None of the fibres, either of the pneumogastric or of the sacral nerves, pass into the uterus until they have mixed with those of the fundamental plexus.

W. VIGNAL.

2. *Ayres on the Development of the Cornea.*—In an article on the development of the eye (*New York Med. Jour. and Obstet. Rev.*, May 1882), Dr. William C. Ayres considers the capsule of the lens, the blood-supply of the foetal eye, the zonula ciliaris and the corpus vitreum, and the cornea and the anterior chamber. To put the development of the cornea briefly, he says that, after the lens sinks into the secondary ocular vesicle, the mesoderm comes in from all sides and takes up the previous position of the tissue which the lens carried in front of it. The tissue of the mesoderm comes in in bulk, and therefore the cornea has both cells and intercellular substance from the very beginning. When first pushed in, the tissue has its cells indiscriminately scattered about through it, just as they are in the mesoderm, but subsequently they disappear in a zone just under the epithelium, and a clear membrane is produced, which is afterward transformed into the membrane of Bowman. The same takes place below, and the membrane of Descemet results. The epithelium of the cornea is from the original ectoderm, the endothelium, formed from the cells of the mesoderm which are situated in this locality. The author considers the tendency to speak of the cells on the membrane of Descemet as epithelium to be incorrect, since the term ignores their method of formation. The peculiar process used by nature in the formation of the anterior chamber (the production of holes and meshes) is not unique. In the formation of the joints and some of the cavities in the abdomen we meet with the same device.

3. *Wolff on the Nerves of the Cornea.*—Dr. Wolff (*Archiv für Mikroskop. Anat.*, Band xx, Heft 3) states that the nerves of the cornea are enclosed

in a medullary sheath, which differs from the medulla of other nerves in so far as it does not contain fatty substance. He also states that some nerves terminate in the substance of the cornea in free points.

4. *Wolff on Free Endings of Sensory Nerves.*—Dr. Wolff (*Ibid.*) describes free terminations of sensory nerves in connective tissue and in epithelium. The medullary sheath becomes finer, and at last the axis-cylinder projects as fine free fibrillæ. He believes that the sheath of Schwann becomes incorporated with the surrounding connective tissue. The preparations on which the author bases his views were obtained by the use of potassium, and gold chloride in weak solution (1 : 5000 to 1 : 2000), and exposure to light in acidulated water.

5. *Lucas on Hereditary Tendency to the Production of Supernumerary Digits.*—In Vol. xxv of *Guy's Hospital Reports*, Mr. R. Clement Lucas gives a genealogical table of a family in which supernumerary fingers and toes can be traced through five generations. This abnormal development was transmitted through the maternal great grandmother and mother to the man who furnished Mr. Lucas with the history, and whose children were also affected. This great grandmother, Mr. Lucas states, appears to be responsible for abnormalities occurring in no fewer than twenty-four persons out of a total of eighty descendants, or thirty per cent. of those carrying her blood. The maternal grandmother had a family of eight, five of whom were affected, viz., two sons and three daughters. Her eldest son, though himself normal, had three children affected out of a total of nine. The second son, who had six toes on each foot, had seven children, three of whom were affected. The third son, and his family of seven, escaped. The fourth son, who had not any family, had six toes on each foot, and was the subject of hare-lip. The eldest daughter, who had six toes on each foot, had four sons and a daughter; of this family, two sons, the first and fourth, had extra toes. The second daughter had an extra finger on each hand. She had a family of ten, of which two only were affected—a son and a daughter. The third daughter, the mother of Mr. Lucas's informant, had an extra finger on each hand. This member of the family gave birth to seven children, five sons and two daughters, three of whom were abnormal. The fifth, who came under Mr. Lucas, had six toes on one foot, seven on the other, with the inner toes webbed, five fingers and a thumb on one hand. His eldest son had hare-lip and cleft palate, and a web between the first and second toes in each foot. The youngest son was born with five fingers and a thumb on each hand, six toes on each foot, and a web between all the toes. The second, third, and fourth children, two girls and a boy, escaped.

W. JOHNSON SMITH.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. SCHIFFERS.—A Tubercular Cavity in the Larynx, in a Patient the Subject of Cancer in the Stomach. (*Ann. de la Soc. Méd.-Chir. de Liège*, June 1882.)

2. TORDEUS.—A Case of Catarrhal Croup. (*Jour. de Méd., de Chir., et de Pharm. de Bruxelles; Rev. Mens. de Laryngol.*, Sept. 1882.)

3. MASSUCCI.—On Fracture of the Cricoid Cartilage. (*Arch. Ital. de Laringol.*, Anno 1. Fase 3, 1882.)

4. COZZOLINO.—The Transmissibility of Diphtheria from the Fowl to Man. (*Ann. des Mal. de l'Oreille, du Larynx*, etc., March 1882.)

5. WARD.—Paresis of the Vocal Cords. (*Arch. of Laryngol.*, April 1882.)

6. WHIPHAM.—A Case of Aneurism of the Aorta Causing Bilateral Paralysis of the Vocal Cords. (*Brit. Med. Jour.*, May 13, 1882.)

7. HERING.—Mechanical Treatment of Stenosis of the Larynx. (*Ann. des Mal. de l'Oreille, du Larynx*, etc., May and July 1882.)

8. LEFFERTS.—A New Classification for the Motor Affections of the Larynx. (*Arch. of Laryngol.*, April 1882.)

9. SEMON.—Esophageal Carcinoma in a Goitrous Patient. (*Ibid.*)

10. PORTER.—Obstruction of the Nares a Cause of Asthma. (*Ibid.*)

11. RUMBOLD.—The Relation of Nasal Catarrh and Nasal Polypi to Asthmatic Symptoms. (*Ibid.*)

12. WALB.—The Etiology of Nasal Blennorrhoea. (*Rev. Mens. de Laryngol.*, June 1882.)

13. VOLTOLINI.—Operations on Nasal Polypi by means of the Sponge. (*Monats. für Ohrenheilk.*, No. 1, 1882.)

14. SCHAEFFER.—Nasal Polypi. (*Wien. Med. Woch.*, No. 23, 1882.)

15. GENTILHOMME.—Employment of Sulphate of Atropine in the Treatment of Coryza. (*Rev. Méd. Française et Etrangère*, July 1, 1882.)

16. BENNETT.—Laryngeal Fistula, probably of Lupoid Origin. (*Dublin Jour. of Med. Science*, July 1882.)

17. MUSSER.—Enchondroma of the Larynx. (*Philadelphia Med. Times*, May 6, 1882.)

18. MAURER.—Extirpation of the Larynx. (*Berl. Klin. Woch.*, Nos. 26, 27, 1882.)

1. *Schiffers on a Tuberculous Cavity in the Larynx in a Patient the Subject of Cancer of the Stomach.*—The patient, whose larynx was shown by Dr. Schiffers at the Medico-Chirurgical Society at Liège (*Ann. de la Soc. Méd.-Chir. de Liège*, June 1882), had suffered from pulmonary tuberculosis, but had complained equally of gastric troubles. The posterior third of the left vocal cord was swollen and immovable; the right cord also was paralysed. At the *post mortem* examination, besides the usual tubercular lesions in the lungs, a cancerous tumour was found in the stomach near the pylorus, causing such a narrowing of this orifice as hardly to admit the tip of the little finger. The mesenteric glands were swollen and often caseous. The larynx presented a large tuberculous cavity affecting, principally, the posterior part of the left vocal cord.

2. *Tordeus on a case of Catarrhal Croup.*—In remarking on this case (*Journ. de Méd., de Chir., et de Pharmacologie de Bruxelles: Revue Mensuelle de Laryngologie*, etc., Sept. 1882), Dr. Tordeus proposes the following division to avoid the confusion which exists among croupous affections. (1) Nervous croup, or simple catarrhal laryngitis (false-croup; stridulous laryngitis). (2) Catarrhal croup, or serous mucopurulent laryngitis. (3) Croup, properly called, or pseudo-membranous non-contagious laryngitis. (4) Diphtheritic croup, or contagious pseudo-membranous laryngitis.

3. *Massucci on Fracture of the Cricoid Cartilage Recovery.*—This case is related in the *Arch. Ital. di Laringologia*, anno 1, Fasc. 3, 1882. A woman, aged 55, received a blow upon the anterior region of the neck. When she recovered consciousness, she had lost her voice. On examination, made some time afterwards, a depression was found in the right

lateral region of the neck, and the larynx appeared to deviate from the middle line. Dr. Massucci convinced himself that there had been fracture of the cricoid cartilage, now in process of cure by the formation of callus. A slight laryngitis was present, which yielded to treatment, and the aphonia then disappeared. Dr. Massucci, having consulted the literature of the subject, and made several experiments on dogs and the dead body, arrives at these conclusions. 1. Fractures of the cartilage of the larynx are rare. 2. Force, to produce them, must act under special conditions; and the cartilages must be ossified. 3. If ossification have not taken place, all the symptoms of a fracture may be present, but, on examination, lesions of other tissues only are found. The following conditions, besides ossification, favour the occurrence of fracture: (1) Force coming into contact with the larynx directly from before backwards. When applied laterally or from above downwards, or from below upwards, the larynx will only be bruised. (2) Force applied whilst the larynx is held immovably in position by the simultaneous action of the various muscles attached to it. Opinions held as to the production of fracture by strangulation are contradictory. The author, from his experience, believes that it is never produced by strangulation, except when the cartilage is ossified. Statistics of authors prove that the cricoid cartilage is most often fractured. Dr. Massucci thinks that crepitation is not a certain indication of fracture, as it may be due to the rubbing of the larynx against the vertebral column.

4. *Cozzolino on the Transmissibility of Diphtheria from the Fowl to Man.*—The author relates (*Giornale Int. delle Sci. Med.; Annales des Maladies de l'Oreille, du Larynx*, etc., March 1882) a case of localised diphtheria in the anterior region of the mouth in a child twenty months old, with swelling of the submaxillary and submental glands. Fever was the only general symptom. The glands suppurated, and the pus was discharged through the auditory passages. Dr. Cozzolino believes that this case had some connection with an outbreak of diphtheria among the fowls of a neighbouring farm. The child had a predisposition to contagion (she had just recovered from typhoid fever) and the affection was located in just the same parts as in fowls affected by diphtheria.

5. *Ward on Paresis of the Vocal Cords.*—Dr. Ward (*Archives of Laryngology*, April 1882) summarises as follows. 1. The arytenoideus muscle is the principal agent in the production of the affection styled paralysis of adduction. 2. Elliptical paralysis is caused by a paresis of the crico-arytenoidei laterales, through the inability of the latter bodies to revolve the arytenoid cartilages inward when approximated. 3. The thyro-arytenoidei are the only relaxors of the vocal cords, and the type of paralysis produced by these muscular bodies is characterised by a perpetual tension of the vocal bands when adducted. 4. The crico-thyroids are the only vocal tensors, and a paralysis of these latter muscles is manifested by the cords being permanently relaxed when approximated.

6. *Whipham on a Case of Aneurism of the Aorta causing Bilateral Paralysis of the Vocal Cords.*—The patient (*Brit. Med. Jour.*, May 13th, 1882) was 55 years old. There was a history of alcoholic excess, but not of syphilis. Two months before admission he was taken with hacking cough and pain in the

thorax and epigastrium. The signs of aneurism were not well marked, but the laryngoscope showed complete paralysis of both abductors of the vocal cords. Dyspnoea became so urgent that tracheotomy had to be performed, but without any relief, and the patient died two hours after the operation. On *post mortem* examination, a huge aneurism of the descending aorta was found flattening out the left recurrent nerve, but the right nerve was at some distance and apparently unaffected. The cardiac plexus, however, had been compressed between the displaced trachea and the aorta. Two similar cases are reported in the *Transactions of the Pathological Society* (vols. xxiii, xxiv), but in neither was there a note of any pressure on the cardiac plexus having been observed.

7. *Lefferts on a New Classification of the Motor Affections of the Larynx.*—The following classification is submitted by Dr. Lefferts (*Archives of Laryngol.*, April 1882), who suggests that a rearrangement and a greater simplification of the entire subject of neuroses and motor affections of the larynx is desirable, not only for present purposes of discussion and investigation, but also in view of the needs of the student. '1. Motor paralyzes of the larynx, the result of complete, usually acute, morbid implication of the nerve-centres, or of the main nerve-trunks, the lesion being either unilateral or bilateral, and the vocal cord or cords assuming the cadaveric position. 2. Motor paralyzes of the larynx, the result of incomplete, usually slowly progressive, lesion of either the nerve-centres, or, more commonly, of the nerve-trunks in their course; certain nuclei of the former, or certain fibrils of the latter, alone being implicated, certain muscles alone are paralysed. The abductor muscles of the glottis possessing a peculiar proclivity in this respect, and practically being the only ones thus affected, the lesion may be unilateral or bilateral. 3. Motor paralyzes of individual muscles of the larynx, the result of implication of certain peripheral nerve twigs by local or intralaryngeal lesions. 4. Motor affections of single or groups of laryngeal muscles, the result of simple myopathic change in said muscles of a degenerative character. 5. Motor paralyzes, functional in their nature, the adductor muscles being the ones commonly affected, the abductors very rarely.'

10. *Porter on Obstruction of the Nares as a Cause of Asthma.*—In a paper on this subject (*Archives of Laryngol.*, April 1882), Dr. Porter draws the following conclusions. Reflected irritation from nasal obstruction may be the exciting cause of asthma. In long continued asthma from this cause, local bronchial lesion may result. In such a case, removal of the nasal obstruction may not entirely relieve the asthma. Removal of the cause of reflex irritation is necessary to a cure of the asthma.

11. *Rumbold on the Relation of Nasal Catarrh and Nasal Polypi to Asthmatic Symptoms.*—Dr. Rumbold reports (*Archives of Laryngol.*, April 1882) several interesting cases to show the close relation between nasal disease and affections of other parts of the respiratory apparatus. He states that every asthmatic patient he has seen has nasal irritation, which, if relieved, will have a tendency to relieve the attacks of asthma. He bases this assertion on the observations he has made during the last twelve years on over fifty patients. From each of these patients he has learned that they had had severe colds each spring and autumn for a number of years. The characteristic shortness of breath

(which is, indeed, asthma in its first stage), suffered by catarrhal patients who are corpulent, has been constantly relieved by Dr. Rumbold by a thorough yet mild treatment of the pharyngo-nasal and nasal cavities.

12. *Walb on the Etiology of Nasal Blennorrhæa.*—The author (*Rev. Mens. de Laryngol.*, June 1882) reports a case where a purulent and fœtid secretion from the nose was set up by a carious tooth, and ceased on its extraction.

13. *Voltolini on Operations on Nasal Polypi by Means of the Sponge.*—The author relates a case (*Monats. für Ohrenheilk.*, No. 1, 1882) of nasal polypus, in which, other means having failed, he had recourse to the method he had previously adopted for removing laryngeal polypi. To a small sponge he attached a strong doubled thread, and, with Bellocq's sound, passed one of the threads through the nostril, and, by pulling it forcibly, sponged out the nasal cavity. The only precaution necessary is to pass the sponge as quickly as possible from the pharynx into the posterior nares, and thus, as much as possible, to avoid the pain and suffocative attacks to which manipulation at the back of the mouth gives rise.

14. *Schäffer on Polypi of the Nose.*—In the *Wiener Med. Woch.*, No. 23, 1882, Dr. Schäffer reports upon the cases of nasal polypi in which he has operated during the past eight years—120 in all. There were 100 recoveries, 17 relapses, 3 deaths; 102 were gelatinous, 8 fibroid, 7 cystic, and 3 carcinomatous.

15. *Gentilhomme on the Employment of Sulphate of Atropine in the Treatment of Coryza.*—According to Dr. Gentilhomme (*Rev. Méd. Française et Étrangère*, July 2, 1882), sulphate of atropine (from a quarter of a milligramme to one milligramme, given as a pill) has an immediate effect upon the first stages of coryza, often arresting the progress of the disease. It also produces great relief when the coryza is confirmed, but its action is less remarkable than at the beginning of the inflammation. When bronchitis exists at the same time, the sulphate produces an equally favourable effect upon the bronchial mucous membrane. The employment of sulphate of atropine is based upon the fact that it has the power of lessening the nasal mucous secretion to the extent of completely drying it up; and at the same time it acts upon the vessels by relieving their congestion.

16. *Bennett on Laryngeal Fistula, probably of Lupoid Origin.*—This case is reported in the *Dublin Jour. of Med. Science*, July 1882. The patient, a woman, suffered from a laryngeal fistula in the region of the inferior part of the cricoid cartilage, and directly below the crico-thyroid membrane. Respiratory trouble had come on a year previously, accompanied by some sanguineous expectoration on one or two occasions. Six months afterwards, a swelling was noticed on the middle part of the neck, and later a rent in the skin and a fistula communicating with the larynx appeared. The ulceration was of a lupoid character. The epiglottis was covered with red spots, the left cord deeply ulcerated and almost destroyed, and the larynx in general covered with ulcerations. The patient had then no other cutaneous lesion which could confirm the diagnosis of lupus; but afterwards erysipelas attacked the face and neck, after which the fistula closed, and the voice returned.

17. *Musser on Enchondroma of the Larynx.*—The patient, a man aged 50 (*Philadelphia Med. Times*,

May 6, 1882) had for a long time lost his voice, and could not make the least effort without provoking dyspnoea. The breathing soon became stridulous, but deglutition was normal. There was no expectoration. With the laryngoscope, congestion of the base of the epiglottis and the ary-epiglottidean folds and paralysis of the right vocal cord were discovered. Beneath the vocal cords, and upon the posterior wall, a tumour was seen obstructing almost entirely the entrance into the trachea. Tracheotomy was performed, but the patient succumbed to a resulting pneumonia. At the *post mortem* examination, the growth, of the size of a nut, was found to be an enchondroma springing from the right half of the posterior part of the cricoid cartilage. The arytenoid cartilage of this side was entirely immovable.

W. J. WALSHAM.

18. *Maurer on Extirpation of the Larynx*.—In the *Berl. Klin. Woch.*, Nos. 26 and 27, 1882, is a full report from Dr. F. Maurer of Heidelberg, of three cases, in which total extirpation of the larynx was performed by Professor Czerny. The first is a case of lympho-sarcoma of the larynx in a man aged 46, on whom the operation was performed in 1878, and who died in November 1879, after purulent degeneration of much enlarged and secondarily affected glands. The subject of the second case, who was forty-seven years of age, was affected with epithelioma of the larynx; the operation was performed in October 1880, and death occurred in the following March after relapse and profuse hæmorrhage. The third patient, who was also forty-seven, and affected with epithelioma, was treated by operation in May of last year, and up to the time of the publication of this report remained in good health. In these three cases, Dr. Maurer remarks, as in most of those of cancer of the larynx, the disease had been developed slowly, and had remained localised for a long time. In the first and third cases the disease had lasted two years, and, in the second case, five years. According to Ziemssen, sharp pains radiating from the region of the larynx to the internal ear constitute a characteristic symptom of laryngeal cancer. In the first only of Czerny's cases, that of sarcoma of the larynx, did the patient complain of such pains, which depend, it is pointed out by Dr. Maurer, rather on the situation than on the nature of the new growth. In one case of advanced laryngeal cancer, under the care of Czerny, the patient complained much of lancinating pains, but was much relieved for a time in this respect, after discharge of pus from some enlarged and suppurating glands situated on each side of the larynx. Dr. Maurer holds with Landerer that, in cases in which it is proposed to remove the larynx, preliminary tracheotomy should be performed, if possible, at least fourteen days before the main operation, and that the trachea should be opened, in this first proceeding, below the isthmus of the thyroid (inferior tracheotomy). If the preliminary tracheotomy be performed above the isthmus, the surgeon, in removing the larynx, is apt to be impeded in his manipulations by the contiguity of the cannula and of the Trendelenburg's plug. In Czerny's operations the larynx was detached from above downwards, and the trachea was not divided until the last stage. Dr. Maurer, though unaware of any disadvantage attending this method, acknowledges that, with Landerer's method of cutting from below upwards, and dividing the trachea in the first place, the tracheal opening can be at once plugged, and the subsequent stages of the operation may thus be performed with-

out any fear of the blood running into the air-passages, which are now doubly secured both by this plug, and by the Trendelenburg plug around the cannula applied at the time of the preliminary tracheotomy. To Landerer's practice of leaving the epiglottis when this is possible, Dr. Maurer objects that a possible source of relapsing disease may thus be allowed to remain. Professor Czerny, in his operations, attempted to secure every vessel before its division. The wound in each case was disinfecting in the first place with a five per cent. solution of chloride of zinc, and then plugged with Lister's gauze. During the after-treatment, each patient was allowed to remain in his usual position in bed, and no endeavour was made to place the head in a lower position than the body, with the view of preventing the secretions of the wound from flowing into the air-passages. The antiseptic dressing was changed several times during the day, and neither burrowing of pus, nor aspiration of the discharge from the wound was observed in any of the three cases. In two cases the food, instead of being administered by the mouth, was passed through a soft elastic tube (a Nélaton's catheter) introduced into the œsophagus by the wound, and allowed to remain. A sufficient amount of fluid nourishment could thus be readily supplied. It is recommended that the Trendelenburg's cannula and plug inserted at the preliminary tracheotomy be kept in place until the eighth or ninth day, in order to avoid any risk of secondary hæmorrhage. The instrument should not be retained for a longer period than ten days, for fear of sloughing, which it is apt to produce. No attempt should be made to apply an artificial larynx before the end of the second week. Earlier experiments of this kind might cause secondary hæmorrhage, and after a fortnight's interval the tissues at the seat of operation have become firm, there is much less risk of hæmorrhage, and, through cicatricial retraction, the canal formed by the wound has acquired somewhat of its subsequent and persistent form.

W. JOHNSON SMITH.

OPHTHALMOLOGY.

RECENT PAPERS.

1. LITTEN.—Alterations in the Fundus Oculi in Certain Nervous Affections. (*Verhandl. der Berlin. Med. Gesellsch.*, Band xii.)
2. GALEZOWSKI.—The Treatment of Parenchymatous Xerophthalmia. (*Recueil d'Ophthal.*, April 1882.)
3. KRONDHJEIN.—On Central Tobacco Amblyopia. (*Recueil d'Ophthal.*, April 1882.)
4. BARRAQUER, J.—On the Treatment of Dacryocystitis. (*El Genio Med.-Quir.*, July 31, 1882.)
5. KUBLI.—On Amyloid Tumours of the Conjunctiva. (*Knapp's Archives*, vol. xi, No. 2.)
6. NIEDEN.—A Case of Pulsating Exophthalmos of both Eyes. (*Knapp's Archives*, vol. xi, No. 2.)
7. ADAMÜK.—On Tumours of the Eye. (*Knapp's Archives*, vol. xi, No. 2.)
8. AYRES.—On Sympathetic Inflammation. (*Knapp's Archives*, vol. xi, No. 2.)
9. KNAPP.—Foreign Bodies Tolerated in the Eye, with Preservation of Good Sight. (*Knapp's Archives*, vol. xi, No. 2.)
10. CHISHOLM.—An Obscure Case in Nerve-Pathology accompanying Optic Neuritis. (*Knapp's Archives*, vol. xi, No. 2.)
11. NOYES, H.—Two Cases of Hemi-Achromatopsia. (*Knapp's Archives*, vol. xi, No. 2.)

1. *Litten on Alterations in the Fundus Oculi in Certain General Affections.*—Dr. Litten communicates (*Verhandl. der Berl. Med. Gesellschaft*, Band xii, p. 21) the ophthalmoscopic changes observed by him in four groups of cases. 1. *General Anæmia.*—The disc is here pale, with sharply defined edge; ultimately it may be quite white, but it wants the bluish tint of atrophy. Arteries and veins frequently show no difference in colour, the central reflex being absent. Hæmorrhages and greyish-white patches are common, and ultimately the signs of neuritis or neuro-retinitis may appear. Dr. Litten finds, in the retina of such cases examined microscopically, a general cell-infiltration, the patches frequently consisting exclusively of exuded white blood-corpuscles.

2. *General Venous Congestion.*—Here the disc is red, and the fundus, in place of the clear red of anæmia, gives a dark-red reflex. The vessels are gorged and tortuous, and, along with the hæmorrhages and white patches of anæmia, there is a greater tendency to inflammation. In two cases of chronic bronchitis and emphysema, with marked cyanosis, he describes peculiar coin-like hæmorrhages, bearing to the veins on which they principally were somewhat the relation that the Malpighian bodies have to the renal arteries. 3. *Poisoning with Nitrobenzol and Aniline.*—Dr. Litten records a carefully observed case of this. The patient lay comatose for forty-eight hours, and during this time the skin and mucous membranes had a deep violet colour. The fundus showed the same deep violet colour, the vessels being dark, almost inky in colour, with a few hæmorrhages. The violet seems due to the aniline, as nitrobenzol usually gives a blue colour.

4. *Miliary Aneurism of Brain and Retina.*—The patient here became suddenly insensible, with left hemiplegia and partial facial paralysis. The ophthalmoscope simply showed extensive hæmorrhages obscuring the field. *Post mortem* examination showed numerous aneurisms of the cerebral and retinal vessels.

JAMES ANDERSON, M.D.

2. *Galezowski on the Treatment of Parenchymatous Xerophthalmia.*—Dr. Galezowski, in an interesting article on xerophthalmia (*Recueil d'Ophthal.*, April 1882), contrasts the comparative rarity of this disease in Europe with its frequency in certain countries, such as Algeria. This fact he explains by the etiological relation existing between xerophthalmia and granular ophthalmia. He does not accept the usual classification of xerophthalmia into parenchymatous and epithelial, but proposes to substitute for this a division into primary and secondary. In the former the conjunctiva only is affected, and the cornea undergoes no change until the lids, by their retraction and pressure, have mechanically affected it. In the second the disease falls both on the conjunctiva and cornea, and at a very early stage ensures the opacification of the latter. The cause of the affection is to be found in progressive atrophy of the proper tissue of the conjunctiva, not primarily in an alteration of the secreting glands, or in a consequent failure of lubrication. As to treatment, the author believes that the only satisfactory method is that of engrafting, as has already been done in cases of symblepharon. Should opportunity offer, he proposes to remove the conjunctiva from a human eye freshly enucleated, and apply it to the affected lids. Meanwhile, he has already tried with success a graft of rabbit conjunctiva. The patient in this case was a female aged 55. Twelve years ago, she contracted granular ophthalmia. When first seen, the right eye was completely atrophied, the left the seat of a huge

leucoma, which was spread over the whole cornea, with the exception of a small portion superiorly. Entropion and trichiasis were present, and the mucous membrane of the lower lid was reduced to cicatricial tissue. The eye was completely 'dried up', although tears were still secreted. For the relief of this condition, the following operation was performed. The lid was dissected in its whole extent from the globe, and set free from its attachments. The raw surfaces were then bathed with a solution of carbolic acid, and after a short interval a rabbit's conjunctiva, freshly removed, was laid upon them. This was held in position by three sutures at the edges, and two chief ones of catgut, passing from the *cul-de-sac* through the whole thickness of the lid. Treatment consisted in the frequent application of vaseline between the lids, and of warm compresses externally. On the day after the operation, the transplanted flap had become white, and mortification seemed imminent. On the third day, however, it assumed a more healthy appearance. By the seventh day the *cul-de-sac* had become re-established with a depth of seven millimètres, and a lustrous and perfectly lubricated surface. About two months and a half after the operation, the patient could count fingers at four inches. There was no morbid secretion, and the conjunctival sac was in good condition. In his remarks on this case, Dr. Galezowski considers that Dufour's plan of transplanting a portion of buccal mucous membrane might often give good results, but he himself would prefer a portion of conjunctiva, as more resembling the natural parts. [An excellent plan of treatment in these apparently hopeless cases is to sew the lids together, having previously excised a small triangular portion of the upper and lower palpebral margins to serve as a pupil. The lids should not be opened for a year or eighteen months. When they are opened, a great improvement is often visible.—*Ref.*]

3. *Krondhjem on Central Tobacco-Amblyopia.*—Dr. Krondhjem records three cases of tobacco amblyopia (*Recueil d'Ophthal.*, April 1, 1882), two of them occurring in females, while in one the patient was already colour-blind for red and green. The first case was that of a sailor aged 36, who had smoked eight to ten pipes of tobacco daily, but who did not indulge in alcohol. The only treatment was abstinence from tobacco, and this within twelve days brought vision up to normal. The second case occurred in a woman aged 51, who had contracted the habit both of smoking and chewing, on account of a cough. Treatment consisted in abstinence, and in the use of electricity. In this case the amelioration was spread over a month. The third case also occurred in a woman, who had smoked three pipes of strong tobacco daily for some years. In both eyes there was a scotoma; with the right neither red nor green could be distinguished, but only blue; in the left all three colours. The author believes that these are the only two cases on record of tobacco amblyopia occurring in a female.

4. *Barraquer on the Treatment of Dacryocystitis.*—In an article on the treatment of dacryocystitis (*El Genio Med. Quir.*, July 31, 1882), Dr. Barraquer considers that the operation of removal of the lacrimal gland should be reserved exclusively for those cases in which, owing to destruction of the sac or some other cause, catheterisation has become impossible. After the removal of the gland, the eye still continues abundantly moist. He gives notes of a case in which he performed the operation with success. The patient was thirty-eight years of age, and

had suffered from obstinate epiphora from infancy, and more recently from double lacrymal fistulæ. He also suffered at the time from chronic conjunctivitis and madarosis, nor could the catheter be used in his case, as any attempt to do so at once brought on convulsions. The gland was removed under chloroform by an incision two millimètres below the external half of the brow. The gland was thus exposed, and turned out with the handle of the scalpel under spray, and the wound brought together with sutures. Three days afterwards, when the dressings were removed, the epiphora was found to have ceased. In 275 cases of dacryocystitis, the author has had to perform ablation of the sac in only three. The first occurred in a man aged 25, in whom bony obstruction of the duct rendered the passage of a catheter impracticable. The second occurred in a youth aged 16, who had had a severe attack of erysipelas, which had involved the sac and ducts. After six months of catheterisation, no improvement had taken place, and suppuration continued very profuse. In the third, removal was done for lacrymal fistula of ten years' standing. The author recommends the following method of ablation. He makes a vertical incision through the fistula into the sac, through which he introduces a good-sized plug of charpie, in order to expose every portion of the mucous membrane. An application of Canquoin's paste (chloride of zinc) is then made; and when the eschar separates, an injection of 2½ per cent. lotion of carbolic acid and water is used, the cavity being dressed from the bottom with lint soaked in salicylic acid. As regards the operation of ablation of the gland, the only inconvenience which the author ever experienced was a slight ptosis of the lid. He considers that, in cases where the conjunctiva is healthy, this ptosis is productive of little inconvenience.

5. *Kubli on Amyloid Tumours of the Conjunctiva.*—In a very exhaustive article on the clinical significance of so-called amyloid tumours of the conjunctiva, Dr. Theodore Kubli of Dorpat (Knapp's *Archives*, vol. xi, 2) states that, in the preliminary stages of the affection, the conjunctiva is the only tissue attacked. Later on, however, other portions of the lids, or even other ocular tissues, may become involved. In 27 cases (37 eyes), the whole conjunctiva was affected in 13, the conjunctiva fornix in 1, the scleral conjunctiva in 4, the tarsal conjunctiva in 1. The prevalent locality is the upper fold and neighbouring portions of the tarsal conjunctiva. He divides the stages of development into four: 1. Simple adenoid proliferation of the subconjunctival tissue; 2. Hyaline degeneration; 3. Exquisite amyloid degeneration; 4. Calcification and ossification. If the neoplasm be poorly supplied with vessels, it is generally of a bright yellow colour, glassy and elastic; if highly vascular, it varies from reddish yellow to reddish brown. During the first phase of development, the most common symptoms are heaviness of the lids and increased sensibility of the eye to various influences. In the second, the surface of the tumour becomes smooth and glistening. The greater the vascularity of the tumour, the less its consistency. Tumours in this phase are harder than those in the first, and more elastic than those in the third. In the third, the consistency varies from hard to gelatinous, depending on the degree of vascularisation. The tissues sometimes pit on pressure. In the fourth phase, the amyloid degeneration is complicated with the presence of chalk or true bone, sometimes deeply situated in the tumour, and discoverable only by the

microscope. The disturbances caused by amyloid tumours are chiefly mechanical, and include deformity, impaired mobility always of the lids, and often of the globe, ptosis, and secondary affections of the cornea, pannus, and consecutive impairment of vision. The disease has nothing in common with trachoma, but originates in a hitherto healthy conjunctiva. The simultaneous existence of trachoma and amyloid degeneration must be looked on as accidental. Relapses sometimes occur after extirpation, and the author thinks that they are frequent in proportion to the degree in which true amyloid degeneration has taken place. The treatment, when possible, should be radical extirpation at once, but, if not, then partial extirpation at intervals, in order to prevent symblepharon. The chief point in the after-treatment is to cleanse the conjunctival sac frequently and thoroughly with a 2 per cent. solution of boracic acid, which does not irritate. [An exhaustive and valuable article on a rare affection. In addition to the cases given, the editor also refers to a well-marked case published by Drs. Prout and Bull in Knapp's *Archives*, vol. iii, p. 73. In the present paper a very full bibliography is given.—*Rep.*]

6. *Nieden on Pulsating Exophthalmos of both Eyes.*—Dr. Nieden records a case (Knapp's *Archives*, vol. xi, 2) of pulsating exophthalmos in both eyes at the same time—a very rare affection, of which only four similar cases are on record. The patient, a female, aged 36, had, a year before she came under the author's notice, received a severe blow on the back of the head from a fall. She lost consciousness during twelve hours, vomited, and suffered from bleeding from the nose, but not from the ears. Hearing was impaired chiefly by the presence of noises in the ears, and she suffered also a good deal from vertigo and loss of smell. Some four months and a half later, the left eye was noticed to be more prominent than its fellow, while there was also a sense of continuous pressure behind it. A few days later, similar symptoms showed themselves in the right eye. Diplopia was marked, and caused great annoyance. Eight months after the original accident, the author saw her, and failed to detect any disease of the throat or heart, though appearances of exophthalmos were very marked. When both hands were applied to the globes, a rhythmical pulsation could be detected, and any attempt to press the eyes back into the orbits met with strong resistance. A *bruit* heard over the whole anterior part of the head was also present, loudest over the eyeballs. Compression of both carotids caused cessation of almost all symptoms on both sides; compression of the right had no effect. From a review of all the symptoms, the author believes the left internal carotid to have been ruptured in the cavernous sinus, and the lamina cribrosa of the ethmoid bone comminuted. The changes in the right carotid he considers as secondary to the injury in the left, and probably the result of pressure.

7. *Adamik on Tumours of the Eye.*—Dr. Adamik of Kasan gives some interesting statistics relative to the occurrence of ocular tumours in his clinic (Knapp's *Archives*, vol. xi, 2). Among 16,000 accurately registered cases, 58 tumours have been found. Five of these were exostoses from the orbital walls. There were 37 cases of various degenerations of the lids, so that there remained only 16 of primary tumour. He narrates four cases of neoplastic growths which have recently come under his notice. In one, the orbit was filled by a large melano-sarcoma, which, on removal, was found to be supra-

ocular. In the second, a sarcomatous growth was both extra-ocular and intra-ocular. In a third, an episcleral melano-sarcoma was removed, with preservation of the eyeball. In a fourth, glaucoma, with subsequent shrinkage of the globe, was found to be due to intra-ocular melanoma. In this latter case, the patient sought relief for what was diagnosed as glaucoma. The eyeball was of stony hardness; sight was abolished, the pupil dilated, the anterior chamber shallow, and the lens cataractous. No operation was undertaken, and when seen five months later, the eyeball had shrunk to the size of a bean. On removal, the whole space within the globe was found to be filled with a black mass, which appeared to consist only of pigment. On microscopic examination, it turned out to be melanotic carcinoma. What caused the shrinkage is not very evident; possibly, the author suggests, an insufficient blood-supply by stoppage of the vessels, or by their rupture in consequence of the pressure of the sclerotic. The optic nerve was not affected, and after removal no return of the tumour occurred.

8. *Ayres on Sympathetic Inflammation.*—Dr. Ayres records three cases bearing on the subject of sympathetic inflammation (Knapp's *Archives*, vol. xi, No. 2). In the first, the patient had suffered from panophthalmitis, for which the stump had been enucleated. One year afterwards symptoms of sympathetic inflammation appeared, together with great pain in the stump of the excised nerve, which pain was considerably relieved by pressure. The end of the nerve was cut off, with the result of causing an immediate improvement in all the symptoms, and the restoration of perfect vision. The author remarks that this case is a good instance of sympathetic inflammation, arising from the incarceration of the optic and ciliary nerves in the wound made by the ordinary operation of enucleation. The author's second case occurred from the impaction of a fragment of glass in the left eye. Six months afterwards, the right eye became affected, and presented a typical picture of sympathetic iridocyclitis. Linseed poultices were applied for five days, and then the patient returned home, and continued the same treatment for 105 days. He could count fingers at 15'. The left eye at this time was enucleated. About seven months later, vision had risen in the right eye to Snellen No. 1. The media were clear, and the funds oculi normal. This case is interesting, both as showing the value of poulticing as a therapeutic measure, and also because the fact of neuritis being present was established by the ophthalmoscope. Plastic iritis and neuritis were associated here, as they probably are in many more cases than is supposed. The third case was one of rupture of the sclerotic in a man aged 50, followed by sympathetic iridocyclitis, with vision reduced eventually to counting fingers at eighteen inches. This condition had been reached thirty-six days after the receipt of the original injury. Poulticing was continued for three weeks. When examined by the ophthalmoscope, the optic disc was oedematous, and the retinal vessels were blurred and arched forward by exudation. A month later, these symptoms had almost disappeared. Progress continued steadily in both eyes. In the left (originally ruptured), the disc could be seen, and fingers counted with + specific gravity D at 14 feet. The author considers that, as regards sympathetic inflammation, at least two facts can now be considered as certain. One is, that enucleation of the injured eye does not arrest or shorten the course of the disease; the other is, that an iridectomy should not be made until all symptoms of

inflammation have disappeared. He also calls attention to the great value of poulticing as a means of treatment.

9. *Knapp on Toleration of Foreign Bodies in the Eye.*—Dr. Knapp of New York (*Archives*, vol. xi, No. 2) records two interesting cases of foreign bodies tolerated in the eye without serious damage to sight. The first occurred in a man aged 29, who, when hammering a piece of steel, was struck with a fragment, which passed through the cornea, iris, lens, and vitreous body, and finally remained in the retina, one end being free in the vitreous body; vision=20-20, but there was a circumscribed scotoma. The eye was observed for ten weeks, during which time it was free from irritation. The visible lesions were a corneal scar, a scar on the iris, and a greyish streak in the track of the wound through the lens. The vitreous humour was somewhat diffusely opaque, but free from all cords and flakes. The body could be seen plainly with the ophthalmoscope, and was firmly imbedded. The second case occurred in a man aged 21, in whose cornea a fragment of steel had been imbedded, without serious consequences, for over two years, and was successfully removed. As to treatment, Dr. Knapp, in all recent cases, endeavours to remove the foreign bodies by curved hook, forceps, or magnet. If, however, the foreign body be invisible, he places the patient in bed, uses atropine, and bandages both eyes with a flannel roller, thus securing the best conditions for the foreign body to sink on to the retina in case it be floating in the vitreous humour, or to fasten itself into the retina if once it have reached that membrane. A very full bibliography of all known cases (and one unpublished one) is given by the author. There are in all twelve cases on record in which foreign bodies have pierced the walls of the eye, and remained imbedded in the retina without producing material injury. An analysis of these cases is given, with special reference to the size, material, position, lesions produced, and results. As regards the diagnosis, the author calls attention to the value of a symptom sometimes met with, viz., a bright spark, which during examination with transmitted light, seems to flit across the red field. This does not prove that the foreign body is in the vitreous humour, but it may help to determine its position very materially. The prognosis will depend on the size and nature of the foreign body, and the location and extent of the lesions. Tolerance, even if once established, may be limited, and after years the foreign body may become free, and cause destruction of the eye. A case is recorded, in which a foreign body caused three several attacks of iridocyclitis within ten years, with two intervals of rest, one of three' the other of four years' duration.

10. *Chisholm on an Obscure Case Accompanying Optic Neuritis.*—Dr. Chisholm of Baltimore records a remarkable case of obscure nerve-pathology, accompanied by optic neuritis, which occurred in a hitherto healthy man, aged 28 (Knapp's *Archives*, vol. xi, No. 2). The earliest symptom complained of was pain in the movements of the left eyeball, with slight clouding of vision, which proceeded with such rapidity as to destroy sight within twenty-four hours. Similar pains then made their appearance in the right eye, with subsequent blindness in it also. By the morning of the third day, not even the appreciation of light was left to the patient, who otherwise felt perfectly well. A new train of symptoms now commenced from the other extremity of the body, viz., interference with locomotion, with loss of sensation in the feet. A paraplegia developed itself, advancing

steadily and rapidly up the spinal cord, and affecting progressively the feet, legs, thighs, pelvis, abdomen, and thorax. This destroyed life in twelve days from the commencement of the eye-symptoms, the brain remaining clear to within a few hours of death. Ophthalmoscopic examination showed choked discs, with very woolly outlines, but no other intracocular disturbances. No necropsy was permitted. The author asks for an explanation of the appearance of the ocular symptoms with absence of cerebral symptoms, fully three days before there was any disturbance in the lower extremities or bladder. Rapid effusion within the spinal sheath might account for the latter, but will not for the former.

11. *Noyes on Hemi-achromatopsia*.—Dr. Noyes of New York records two interesting cases of acquired colour-blindness (Knapp's *Archives*, vol. xi, No. 2). The first occurred in a medical practitioner, aged 42, of an intensely 'nervous' diathesis. The defect of sight occurred simultaneously with general depreciation of health, vision=O. D. 20-100; in viewing along black line upon a white ground, the patient observed transverse breaks in it of white spaces, which always preserved the same relative position to each other; vision=O. S. 20-20. With the ophthalmoscope each optic nerve showed large physiological cuppings. The tissue of the nerves was whitish, that is, indicated atrophy. The visual fields were normal in extent, but in O. D. the perception of colours was limited to the recognition of blue over a small surface [indicated by a chart]. For a circular space at the centre there was absolute colour scotoma, while beyond the border of the zone no colour could be seen. In the space between 210° and 240°, and about the latitude of 40°, he sometimes seemed to discern red, but this would confound with green. But it was in a very limited region that even this sensation could be excited. In the left eye the visual field had a peripheral limitation on the outer and upper side. The perception of colour was absolutely wanting in the outer (temporal) half of the field, and the line of demarcation ran vertically through the macula lutea. On the nasal half the zones of green, red, and blue had about their usual extent and relations. The so-called Argyll Robertson pupils were distinctly marked. The above symptoms have somewhat improved under treatment; the author is inclined to consider them remotely due to lesion of the spinal cord. The second case occurred in a gentleman aged 60. The general symptoms and ophthalmoscopic appearances pointed either to glaucoma simplex or nerve-atrophy. There were, or had been, no head-symptoms nor indications of disease of the spinal cord, except absence of the patellar reflex. The visual fields were as follows: O. D., no limitation in perception of light. In colour-sense the nasal side was absent, the line of division being vertical through the macula lutea. The temporal side was sensitive to colour; green, red, and blue were perceived over about an equal area, viz., to about 50° O. S. There was no peripheral limitation of the field, but an absolute central scotoma of precisely 10° diameter; colour-perception was wanting on the nasal side, and the line of division was on the vertical meridian. On the temporal side colour was recognised to 40°, and over about equal areas for green, red, and blue. The case was, therefore, one of bilateral nasal hemi-achromatopsia. The author remarks that, in the first case, it may be assumed that there was impairment either in the perception of colour, or in the conductivity of the perception, according to the struc-

tures to which we impute the faculty of recognising colour—whether in the retina or in the nerve-fibres. As regards case 2, the author has great difficulty in locating the lesion, especially on account of its perfect symmetry. This fact, taken singly, would seem to indicate the chiasma or a portion of each tractoptic as its seat—an explanation not, however, free from difficulties. LITTON FORBES.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. HUBBARD.—Arsenic: its Physiological Action, Elimination, and Detection. (*The Physician and Surgeon*, vol. iv, p. 348.)
2. CROOKES.—Lead-Poisoning by means of Water-Supply. (*Chem. News*, 1882, Aug. 25, p. 88.)
3. PONFICK.—On the Dangers attending the Use of the Edible Morel. (*Virchow's Archiv*, Band lxxviii, Heft iii, sec. 445; *Med.-Chir. Rundt.*, 1882, p. 619.)
4. SHAW.—Poisoning by Daphne Mezereum. (*Brit. Med. Jour.*, 1882, vol. ii, p. 521.)
5. Medical Examiners versus Coroners. (*Trans. of the Massachusetts Medico-Legal Soc.*, vol. i, p. 220.)
6. Survivorship.—(*Jour. de Méd. de Paris*, tome ii, pp. 98, 121.)

1. *Hubbard on Arsenic*.—T. H. Hubbard has investigated the physiological action of arsenic, its elimination by the kidneys, and its detection and estimation (*The Physician and Surgeon*, vol. iv, p. 348). As regards its physiological action, he finds that it causes a notable increase of the chlorides excreted in the urine, but has no appreciable influence on the excretion of phosphates; that the uric acid is unaffected, whilst the increase in the amount of urea excreted daily (6 grains) admitted, perhaps, only of the negative deduction that the waste of tissue was not increased. When arsenic was taken in divided moderate medicinal doses (0.06 to 0.12 grain daily) the medicine made its appearance in the urine of a healthy person in about four days, and its rate of elimination was irregular. The maximum amount found in the urine was 0.01 grain on the fourth day after doses of 0.06 grain per day had been taken. When arsenic was given to a person in feeble health, and troubled with indigestion due to gastric catarrh, the metal could not be detected in the urine; and it was inferred that, on account of weak digestion, the arsenic pills passed through the digestive tract undissolved, or that, having been dissolved, and the arsenic passed into the system, it was either there retained or excreted in other ways than by the urinary tract.

2. *Crookes on Lead-Poisoning by Water-Supply*.—An action for injury resulting from the use of a public water-supply has recently been decided at the Yorkshire Summer Assizes (*Chem. News*, Aug. 25, 1882, p. 88). The case is instructive to all interested in the supply of water to towns. The facts and features of the case were these. Mr. Milnes, living in the outskirts of Huddersfield, was attacked, about a year ago, first with violent colic, and ultimately with wrist-drop, and other symptoms of lead-poisoning. He lost almost entirely the use of his arms, his brain was affected, and at one time his life seemed in peril. He subsequently, under treatment, partially recovered the use of his limbs, but was, after a year still unable to dress himself. The fact that he was suffering from lead-poisoning being beyond all dispute, the question

arose as to how the noxious metal was introduced into the system. It appears that the town water-supply is derived from several reservoirs, Mr. Milnes' house being served from the 'Blackmoorfoot' reservoir. All the various water-sources are remarkably free both from organic and mineral impurities, and are consequently exceedingly soft; that from the 'Blackmoorfoot' dam being, perhaps, the purest. Unfortunately, in virtue of that very purity, it is, though perfectly wholesome in the reservoirs, channels, and mains, capable of acting upon lead service-pipes. Concerning the immediate cause and *modus operandi* of this action, differences of opinion prevail. In samples of water drawn from Mr. Milnes' house, 0.34 grain of lead per gallon was found by one analyst, 0.4 grain by another, and a third chemist found 0.77 and 0.84 grain respectively in two samples. On the other hand, a fourth analyst found in a sample of water from the kitchen only 0.01 grain; and in that from the wash-house, 0.04 grain. These discrepancies are quite intelligible, when the varying periods of time which the water may have been in contact with the leaden service-pipes is taken into consideration. The important point was—Does the water of the 'Blackmoorfoot' reservoir dissolve lead more rapidly than soft waters generally, and if so, why? It is stated that the Blackmoorfoot water very closely resembles that supplied by the Manchester Corporation. Indeed, the waters of Halifax, Bradford, Leeds, Batley, Sheffield, and Manchester, as well as that from most of the Huddersfield reservoirs, if allowed to lodge in a lead pipe for twelve hours, all took up appreciable quantities of the metal; and it is even reported that the Manchester water has been found to contain 0.3 grain of lead per gallon. Hence, apparently, the Blackmoorfoot water does not form any marked exception to other soft mountain waters. In reply to the question, if lead be so generally present, or liable to be present, in such waters, why is lead-colic not more common? it may be said that lead is very capricious in its action, and that an individual's power of resisting lead is very variable, and stands in no apparent relation to his health and vigour. As regards the solvent action of the water in question, it was admitted to have an acid reaction; and this was perhaps due to presence of sulphuric acid. The dam receives certain ferruginous springs, and the iron salts thus introduced, on being diffused in the water and exposed to air, become split up into a basic salt, which is deposited, and free acid, or, rather, perhaps, an acid salt, which remains in solution. Odling, Crookes, and Tidy were of opinion that sulphuric acid, if present in small quantities, must tend to protect the pipes from the action of the water, a layer of the insoluble, or, at least, very sparingly soluble, lead sulphate being formed. Allen took a different view, and thought that sulphuric acid would produce corrosion. As a remedy, the borough analyst advised lime-water; but it was pointed out, that if this were added in excess, the mischief might be increased. An opinion was also expressed, in explanation of the frequent action of soft pure waters upon boiler-plates, that the agency of corrosion is the oxygen held in solution in the water. If this be the case, the prevention of corrosion will be very difficult, since a thorough de-aëration of the water, even if practicable, would cause it to be disliked by many persons as flat and insipid.

3. *Ponfick on Fungi*.—E. Ponfick has investigated the poisonous nature of the edible morel, *Helvella Esculenta* (Virchow's *Archiv*, Band lxxviii, Heft 3, s. 445; *Med.-Chir. Rundsch.*, 1882, s. 619). He finds that

the morel contains a poisonous principle, which can only be removed by prolonged boiling and expression. He draws up some practical rules as to cooking the fungus, the gist of which is that it must be repeatedly boiled in water and pressed thoroughly, the waters used in the decoctions being rejected.

4. *Shaw on Poisoning by Daphne Mezereum*.—Shaw relates (*Brit. Med. Jour.*, 1882, vol. ii, p. 521) a case of poisoning by the red berries of *Daphne Mezereum*. A child, aged 2½ years, ate a number of the berries, probably fifty. She vomited a little within half an hour. An emetic was then administered, but none of the seeds were rejected. Shortly afterwards she became pale and unconscious, and had a violent rigor. She lay still, with the eyes wide open, the pupils fixed and dilated, and the face blue. The pulse was almost imperceptible, and the breathing was very faint and slow. The lips appeared as if they had been burnt, and the inside of the mouth was swollen. Under the influence of stimulants and stimulating external applications, in two hours the bowels acted violently, and a large number of the seeds were passed. The child continued drowsy, but soon made a complete recovery.

5. *Medical Examiners v. Coroners*.—The Report of the Executive Board on the Work of Medical Examiners in the State of Massachusetts, for the year 1880, is an instructive document (*Transactions of the Massach. Medico-Legal Soc.*, vol. i, p. 201). In that State coroners have been substituted by medical examiners, who examine the bodies of all persons suspected to have died from violence; and an inquest is held only in those cases where this is absolutely necessary. During the year 1880, the total number of views was 935; necropsies, 229; inquests held, 197. The cost to the State, as compared with the old system, is reduced by more than 20 per cent.

6. *Survivorship*.—An extraordinary case, involving a question of survivorship, and the devolution of a large property, has, after much forensic discussion, been compromised at Marseilles, where the incidents of the case occurred (*Jour. de Méd. de Paris*, tome ii, pp. 91, 121.) A man, named Rivoire and his wife, with other persons, were landing in a boat, when a wave from a passing steamer swamped the boat, and the parties were precipitated into the water. One of the party, named Maniette, seized the woman Rivoire—who had laid hold of him by the hair—and swam with her towards the river-bank. Before the two reached the bank of the Rhone, the man Rivoire, in his alarm, seized Maniette by the neck; whereupon the husband and wife—the latter of whom appeared to Maniette to be unconscious—disappeared beneath the water. The body of the man Rivoire was not recovered, but that of his wife was found *in situ* next day. The corpse was pallid, and the countenance unaltered and normal. M. De Beauvais' conclusions, after an examination of the facts and circumstances of the case, were that, as there was evidence that the wife was in a state of syncope at the time of her final immersion, and her husband was uttering cries when he also disappeared at the same moment, the man must have died speedily from asphyxia, and that his wife would most probably survive for a longer period. The state of the wife's body lent confirmation to this supposition; and, finally, it was impossible to prove that the husband was the survivor. The sex of the woman, it was supposed, would favour death from syncope, and hence a longer survivorship than in the case of the man. M. De Beauvais seems to entertain no doubt

whatever that the woman must have been of necessity the survivor. M. Brouardel, however, with greater caution, declined, in the absence of an necropsy on both bodies, to pronounce an opinion as to which of the two—the man or the woman—was the survivor.

THOS. STEVENSON, M.D.

REVIEWS.

Memoires de Chirurgie. Tome troisième. Etats Constitutionnels et Traumatisme. Par le Dr. A. VERNEUIL. Paris: G. Masson. 1883.

Surgical Memoirs. Third volume. Constitutional States and Traumatism. By Dr. A. VERNEUIL. Paris: G. Masson. 1882.

THIS volume, forming the third of a series of surgical memoirs in course of publication by Professor Verneuil, is devoted to the consideration of the relative modifications induced in various constitutional maladies, or, as M. Verneuil prefers to call them, 'Panpathies', by injuries, and the modifying effect of these constitutional conditions on the course of the wounds themselves. It consists, as the two former ones have, of a collection of papers which have been published by M. Verneuil or his pupils since he first took a special interest in the subject, and, as such, forms a historical record of the growth of his views and knowledge of the subject.

The book does not, as its title would lead one to expect, treat fully all the diatheses or constitutional states, but is in main part devoted to the consideration of the alcoholic and malarial, shorter sections treating of the rheumatic, malarial-diabetic, of 'traumatic neuralgia', and of acute traumatic inflammation of the spleen; while in the earlier papers of M. Verneuil, and in a paper of M. P. Clipet, a short mention is made of the effects of the diatheses usually so called. In spite of the very large section allotted to the question of the relation of alcoholism and injuries, the reader finds very little new light thrown upon the subject. M. Verneuil regards an alcoholic as a patient in whom a morbid condition of the principal viscera exists in a more or less advanced stage, combined with a vitiated state of the blood; the condition of the organs being usually one of fatty degeneration or sclerosis. As to any actual lesion of the nervous system to be discovered *post mortem*, he speaks with reserve; but in a foot-note he quotes an oral communication of M. Lancereaux to the effect that, in patients dying from an attack of alcoholic delirium, although recent lesions (even congestion) are not always to be discovered in the brain, yet old lesions, consisting of a granulo-fatty (*granulo-graisseuse*) condition of the cerebral capillaries, and sometimes of the adjacent nerve-cells, are invariably present, as in the case of old men. With regard to the general pathology of *delirium tremens*, M. Verneuil speaks at length in the report of some meetings of the Académie de Médecine. He considers that the condition may have a double origin, being dependent either on nervous irritation starting from the injured spot and conveyed thence to the central organs which he describes as 'a reflex delirium', or on an altered state of the blood, the cerebral disturbance being then due either to anæmia or to septicæmia. With such extended views as to the origin of *delirium tremens*, it would have been interesting to learn from M. Verneuil whether he

is able to draw any diagnostic line between it and the state known as *delirium traumaticum*, originally described by Mr. Travers as prostration with excitement, which is certainly to be met with independently of alcoholism. Both M. Verneuil and M. Ch. Péronn allow the existence of this state; and although the latter, in his essay, makes some remarks on the distinctive diagnosis of alcoholic delirium, in the course of which he essays to prove its identity with the 'délire nerveux' of Dupuytren, no mention is made of the nature or peculiarities of traumatic delirium.

Some space is devoted to the consideration of the class of surgical cases in which sudden death occurs, for which the *post mortem* examination offers no sufficient explanation; and, in the course of his remarks on this subject, M. Verneuil adverts to the question of fatty embolism, between which and alcoholism he thinks a relation will be one day demonstrated. He regards fatty embolism as an anatomical fact, incontrovertibly proved, but is unwilling to accept an exclusive origin for the phenomenon, 'based upon a clinical romance bearing the imprint of exalted imagination.' He thinks the presence of a fracture unnecessary for the escape of the fat-globules into the general circulation, such globules being set free, in large quantity, from adipose tissue generally, in cases of severe traumatic inflammation, accompanied by acute septicæmia; this latter being, in his opinion, their real source of origin. He remarks on the frequency of such inflammation in alcoholic patients in whom fatty embolism is also met with, and asserts that the patients really die from the septicæmia. He asks whether, if the mechanical theory of fatty embolism were true, cases would not be met with in the country, why it should attack some patients rather than others, why antiseptic treatment should affect its occurrence, and why it should be rare in children. In support of his theory, however, he offers only one case, and in that the condition was not discovered.

The importance of diagnosing chronic alcoholism in cases where an operation is contemplated, is dwelt upon, and the previous preparation of the patient by appropriate treatment, as has been recommended by Mr. Savory, is urged; while, with regard to the prognosis, the rule is laid down that, in cases of chronic alcoholism, all other things being equal, the prognosis of traumatic lesions is of exceptional gravity.

As to treatment, the administration of opium, and a proper amount of alcoholic stimulant, is insisted on as prophylactic, the usual treatment by narcotics being relied upon for dealing with *delirium tremens*. M. Verneuil, however, expresses unqualified dissent from those who treat *delirium tremens* by entirely cutting off alcoholic stimulants.

In connection with the subject of alcoholism are two short sections—one on the bronze discoloration of the skin, sometimes met with around wounds, and usually regarded as one of the signs of general blood-poisoning, which is described under the title of 'Phlegmon bronzé'; and another on the presence of pus of an orange colour. This latter, which we find mentioned in some English works, had been described by M. Delore as occurring only in fatal cases, and hence as a dangerous prognostic sign. M. Verneuil gives a number of cases in which recovery took place, and ascribes the colour to the presence of broken up blood-colouring matter. He states, on the authority of M. Broca, that it is not the result of the action of micro-organisms, as has been shown to be the case with the blue pus.

Next in extent to the section on alcoholism, is that devoted to the consideration of the relative effects of malaria and injuries on each other. This includes several papers extending the knowledge on this subject, which we owe to Sir James Paget and others. A large number of cases are given illustrative of the occurrence of intermittent fever, periodical hæmorrhages, and neuralgia in patients who had been exposed to malarial influences, while it is attempted to show that in such patients wounds heal less readily, are especially liable to phagedæna and hospital gangrene, that fractures heal less readily, and even that they are especially liable to tetanus.

That in malarial districts, and while the malarious influence is still strong, the healing of wounds may be interfered with, is no doubt true; in fact, Professor Mazzoni is quoted to the effect that, in the Roman states, malarial infection often so impoverishes the blood as to render patients deficient in strength to undergo major operations; but it would seem that in minor degrees, as in the intercurrent attacks, often seen among the surgical patients at the Seamen's Hospital at Greenwich, the fever is so readily controlled by quinine that the attacks are not, as a rule, held of great moment.

In connection with the subject of malaria, a thesis on acute traumatic inflammation of the spleen, by M. Mathon, has been inserted. The author essays to prove that, although usually considered of great rarity, this disease is of not very unfrequent occurrence, and, in support of his assertion, he gives twenty-seven cases. In all, the disorder followed an injury to the side, and was indicated by pain and tenderness in the splenic region, the pain extending down the left leg, and to the shoulder, and increased by respiratory movements, together with intermittent fever, and increase in splenic volume. None of M. Mathon's cases, however, were fatal, and hence the diagnosis can scarcely be looked upon as settled. They were rapidly cured by the administration of quinine in conjunction with the ordinary treatment adopted in cases of abdominal injury.

M. Verneuil also contributes an essay on a form of neuralgia affecting wounds after the cessation of the first pain due to the injury, but occurring previously to cicatrization. For this affection he proposes the name '*Névralgie traumatique secondaire précocée*'. The pain occurs in the absence of any local condition of the wound to explain it, and has special characters, the most important of which are its periodicity and the power of quinine to cure it. Its characters, etiology, diagnosis, and prognosis, are very minutely described, and the description is supplemented by numerous illustrative cases.

The work concludes with some remarks on the connection and co-existence of malaria and diabetes, also with numerous illustrative cases.

In the preface, Professor Verneuil makes a somewhat vigorous attack on modern operative surgery, the advance of which he considers has been allowed to outstrip that of therapeutics.

The book contains a very large amount of information and practical experience. G. H. MAKINS.

Chronic Bronchitis. By J. MILNER FOTHERGILL, M.D. London: Baillière, Tindall, and Cox. 1882.

Aids to Diagnosis. Part III. By J. MILNER FOTHERGILL, M.D. London: Baillière, Tindall, and Cox.

ANYONE who writes from his heart—to take a popular expression—that is to say, writes from a large

experience upon the subject of chronic bronchitis, is sure to be worth reading. Few diseases require more management; few repay it better. The author of the present volume appears to us to fulfil our requisitions, and, withal, he has composed a very readable book. There are but five chapters, a chatty introduction, followed by the objective and subjective phenomena, the pathological relations, the forms of the disease, and the treatment. Moreover, the chapters are by no means long, and the print is large. Thus there is no excuse for anything short of complete perusal, and whoever undertakes this not difficult task will assuredly derive from it much information. In the chapter on the pathological relations of chronic bronchitis, a subject is touched upon which we should have been glad to see handled a little more fully, as it is by no means unimportant, within the author's limits of a 'practical treatise'—we allude to the subject of fetid bronchitis. Dr. Fothergill appears to endorse the general view that it is an occasional symptom of bronchiectasis, the mucus and pus decomposing in the dilated tubes. We are far from satisfied that this is correct. On the contrary, our experience would lead us to quite another conclusion, that, when fetid expectoration is superadded to bronchiectasis, it is more probable than not that some disintegration of the pulmonary tissue is in progress. In other words, it is diagnostic of ulceration of the bronchial tubes and of local gangrene of the adjacent textures.

The chapter on treatment contains much that is instructive to those for whom the book is intended, practitioners just commencing practice. It contains a judicious summary of the remedies most usually approved for the various forms of chronic bronchitis, and impressive cautions concerning the avoidance of narcotics. The advocacy of strychnia as a stimulant of the respiratory centre is well worth attentive study; and amongst other advice we may single out this as an aphorism which is not sufficiently remembered—that severe disease and suffering demand and justify heroic measures. It must have happened to all of us to see persons in a desperate condition, the disease, the while, being just tickled, if we may express it so, with the appropriate remedy, when, for the required relief, large doses were necessary. Powerful remedies are given at a risk, no doubt; but there should be no cowardice in facing it. Drugs are, perhaps, most of service in dangerous states; and the judgment of the physician is worthless if he allow a case to go on for fear of the ultimate result, and thereby cut off, perhaps, a last chance. The author would appear to have the courage of his opinions, for we read: 'I should push strychnia till the limbs twitched, going up to one-tenth of a grain every five or six hours; or further, if necessary.' Perhaps it would be safer to accept his principle without committing ourselves to his details. His illustration is an extreme one, and it could be but seldom that we should nail so completely to the mast as this. We cannot close this notice without pointing out that the book has two faults. First, it contains far too much of the *ego*. This is not objectionable, when it is the embodiment of experience which is new and peculiar; but it borders upon the ridiculous, and we say this in all good nature, when the author's experience teaches no more than has been the rule for ages. This is so notably with regard to the administration of opium in bronchitis, of belladonna and atropia for profuse sweating. Our other complaint is in the matter of illustrations. 'The addition of numerous illustrations of

diagrammatic character to illumine the text is felt desirable, as the lessons of pathology throw much light of a practical character, upon the diseases of the air-passages.' So we read in the preface. But these diagrams are made to do duty over and over again, and are diagrammatic to such an extent, that if they are helpful to the pathological questions involved, we are yet in the primitive ages of pathology.

"Aids to Diagnosis" is one of the most amusing little pamphlets we have seen. A puzzle solved loses most of its interest; diseases diagnosed in some sort do the same, but the puzzle-solver in this case manages to keep up our interest in the questions he essays, not unsuccessfully, to elucidate, and as we finish his work, we involuntarily remark, 'What a cheap shilling's worth; a book fit for a railway bookstall.' To be sure, it does not strike us as being likely to be of any great use for those to whom it is addressed; but very few of these books are. Its chief utility will be, we suspect, in telling, in an amusing sort of way, a number of well-known but often forgotten facts: an inculcator, by way of shame, of common sense. It is certainly not flattering to the students of medicine that such a book should be necessary—it contains nothing that the commodity entitled common sense would not teach without the reading; but, granting that such works are required, we can certainly say it would be a happy thing if they could always be written in the style which Dr. Milner Fothergill has made peculiarly his own.

J. F. GOODHART, M.D.

A Treatise on the Diagnosis and Treatment of Diseases of the Chest. By WILLIAM STOKES, M.D., D.C.L., F.R.S., etc. With Memoir by Dr. Acland. Edited for the New Sydenham Society by Alfred Hudson, M.D., M.R.I.A. London: New Sydenham Society. 1882.

IT may be a question how far the New Sydenham Society should extend its functions to the republications of the works of deceased British authors, but there can be no doubt it is well advised in placing the volume before us within reach of its subscribers. It has been long out of print; but the late Dr. Stokes' work on *Diseases of the Chest* is so well known that it needs no review. Happily, in the editor's hands it remains the same as it ever was. It is a classic jewel, like Watson and others, sparkling everywhere; it would ill-bear retouching. It is, as Dr. Acland fitly says in his introduction, an historical landmark in medicine, and as such will always have a worthy mission, though increasing knowledge may seem to put it out of date. Dr. Hudson, the editor, has also been removed by death—has died while erecting a monument to his friend. But it is a satisfaction to feel that the monument has been left in loving hands, and loses none of its excellence by the graceful memoir by which it is prefixed. We might, indeed, complain that we are so fascinated at the threshold, by the account of Dr. Stokes as a man, that we have a less keen sense of want than we should otherwise have, and than our education needs, of Dr. Stokes the Physician. To gain some idea, however, of a mind which appears to have been singularly rich in observation and in fancy, one must not stop short of the last page, and it may be doubted whether, among the many lessons which it would impart, any more requires to be taken to heart at the present

day than this, alluded to by Dr. Acland: 'If you would advance knowledge, be content to take up the thread where the last investigator laid it down, and set yourself to carry on his work.' Were we all to follow this advice, there would assuredly be more work and less writing than is the lot of those who live to-day.

On the Morbid Conditions of the Urine Dependent upon Derangements of Digestion. By CHARLES H. RALFE, M.D. London: J. and A. Churchill. 1882.

THIS is an admirable little book; to our mind, the type of what such a book ought to be. It gives abundant evidence of original observation, experiment, and reasoning. The points discussed are: (1) The formation and removal of acid from the body; (2) acid dyspepsia; (3) flatulent or alkaline dyspepsia; (4) uric acid derangements; (5) oxaluria; (6) derangement associated with excessive elimination of phosphoric acid. Dyspepsia is an intricate subject, and one not very satisfactory either to talk or write of; but, few bring the forms of which he treats more within the grasp of reality than Dr. Ralfe. We have always considered that his observations with regard to the behaviour of bicarbonate of potash, according as it is administered during digestion or not, to be of great practical importance in many ways. These are still the most solid additions to our knowledge that the book contains; but we should do the author but scant justice did we not repeat that his work, at all points, is up to the brim with information.

St. Thomas's Hospital Reports. New Series. Edited by Dr. ROBERT CORY and Mr. FRANCIS MASON. Vol. XI. London: J. and A. Churchill. 1882.

THE larger part of the present volume is devoted to a medical and surgical report of the cases admitted during the years 1880-81, and to the calendar and prospectus of the Medical School for next session. The original articles are nineteen in number, and most of them deal with subjects medical. Several of them touch the fringe of very interesting questions, among which may be mentioned Dr. Ord's paper on some cases of 'Paroxysmal Pyrexia Simulating Ague', Dr. Harley's on 'Fæcal Retention especially as it affects the cæcum.' Dr. Bristowe has a short paper on 'Hydatid Tumours of the Abdomen', and there are other useful articles by Mr. Nettleship, Drs. Stone and Lilner, Dr. Edmunds, Dr. Seymour Taylor, &c.

JAMES F. GOODHART, M.D.

Clinical Surgery, Extracts from the Reports of Surgical Practice between the years 1860-1876. By Dr. THEODORE BILLROTH. Translated from the original, and edited, with annotations, by C. T. DENT, F.R.C.S. London: The New Sydenham Society. 1881.

THIS book forms a companion volume to Professor Billroth's well-known *Surgical Pathology*, a translation of which has been already issued by the New Sydenham Society. It purports to be a complete clinical record of the author's surgical practice during a period of sixteen years, accompanied by

observations on many subjects, regarding which his experience enables him to speak with especial weight. As such, it is difficult to over-estimate its importance and worth, as offering to the profession a candid exposition of the experience of a great surgeon, in which the chronicles of success and failure find an equal place.

The report deals with every variety of surgical case, excepting those belonging to the departments of ophthalmology and obstetric medicine; and, although somewhat meagre with regard to cases of surgical injury (from causes adverted to both by author and editor), it is singularly rich in cases of surgical disease. It would be impracticable to give here a detailed notice of all the subjects treated of in the book, but the following sections may be enumerated as of special interest, viz., the section on neuralgia of the fifth nerve and its treatment, plastic surgery of the face, removal of the tongue, operations on the air-passages, the treatment of enlarged cervical glands, the extirpation of bronchocele, the treatment of vertebral caries, diseases of the breast, extroversion of the bladder, litholapaxy, cystitis, ovariectomy (with remarks on 140 cases), gangrene, osteomyelitis, diseases of joints, and the chapters on statistics of amputations and tumours.

The present translation, appearing nearly four years after the publication of the last volume of reports by the author, must not be taken as representing his present views on all subjects, the constantly progressive nature of which, with regard to surgical treatment, will be readily appreciated by everyone who reads the highly instructive and interesting remarks accompanying the cases of ovariectomy; in which case, however, as in one or two others, the editor has brought up the report by information from private sources to the year 1881. For the same reason, we miss any important remarks regarding some of the most recent developments of operative surgery, such as nephrectomy, nerve-stretching, etc., while no mention is made of the treatment of wounds by iodoform, to which so extensive a trial has lately been accorded in the Vienna clinic. We are, however, highly indebted to the editor for an abstract of the pamphlet by Dr. Wölfler, on the recent operations on the stomach performed either by Professor Billroth, or under his direction.

A chapter is devoted to the subject of treatment of wounds, which expresses the author's views, at any rate up to the year 1878, while the editor has been enabled to give us the method of dressing employed in 1881, which consists of a modified carbolic acid dressing without the use of the spray. Although firm advocates of the antiseptic treatment must be disappointed by the moderate enthusiasm for the system here expressed, we cannot but expect to see in a further volume of reports a large diminution in the percentage of deaths chronicled as occurring from pyæmia and septicæmia. The opinions held by the author on this question readily explain the want of favour which many operations with which the reports of some German clinics abound, find with him. Thus we find him disinclined towards early excision of the hip, to opening chronic vertebral abscesses, to suturing the patella, while no mention is made of the modern operation for hydatid of the liver.

The editor is to be congratulated on the highly satisfactory manner in which he has accomplished the difficult and laborious task of selecting and rearranging the materials for the volume, with a view to render them more generally useful. The transla-

tion is pleasant to read, and throughout very correct, although, perhaps, exception might be taken to the rendering of some names; thus, although a precedent has been set in this matter by the translator of Niemeyer's *Medicine*, it would seem better for English readers to use the words typhoid, or typhus abdominalis, rather than 'typhus'; and, again, 'lobular metastatic pneumonia' seems rather to refer to a part of a general septic disorder than to a local inflammatory process, due to the passage of putrid discharge into the air-passages (fremdkörper Pneumonie).

The text is enriched with many useful editorial foot-notes, referring to cases mentioned, and especially to Hackley's translation of Professor Billroth's *Surgical Pathology*. The volume is concluded with a selection from the plates accompanying the original reports. It seems a pity that the explanatory text, published with the illustration of the arrangement of the thoracic veins, in a case of malignant substernal bronchocele, should have been omitted.

G. H. MAKINS.

The Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D., F.R.C.P., Lecturer on Medicine in the Extra-Academical School of Medicine, Edinburgh. Pp. 300. Edinburgh: Maclachlan and Stewart. London: Simpkin, Marshall, and Co. 1882.

THE first impression one receives on opening this volume is, that we have to do with an atlas rather than with a treatise on the diseases of the spinal cord, such is the wealth of illustrations, partly systematic, partly microscopical, which abound on almost every page of the book. We will at once add that, although some of the engravings have been borrowed from the works of Charcot, Gerlach, Flechsig, and others, yet by far the largest majority of them, and more especially the chromo-lithographic representations of microscopical sections, are from original drawings by the author. In a book, which is evidently intended more particularly for students and practitioners, this way of representing the diseases of the spinal cord has an enormous advantage over mere description, as the reader sees while he reads, and is not required, as in so many other works, constantly to call in the aid of imagination for enabling him to comprehend the text. The perusal of a work of this kind is, therefore, not only instructive but actually entertaining, and only few readers will put it aside without having gone to the end.

The first chapter gives a short and concise introduction to the anatomy and physiology of the cord. The author represents this organ as a series of segments superposed upon one another, and each of which comprehends that portion of the cord to which a pair of spinal nerves is attached. Each segment is, therefore, as it were, a distinct spinal unit for a definite area of the body, viz., that portion of muscle (muscular area) to which its anterior roots proceed, and that portion of skin, tendon, muscle, mucous membrane, viscus, etc. (sensitive area), to which the fibres of its posterior nerve-root are distributed. The principle of the clinical examination of the spinal cord consists, therefore, in the systematic and separate examination of each spinal segment, by observing the motor, sensory, reflex, vaso-motor, and trophic condition of its body area; and the comprehension of the diseases of the organ consists of the correct understanding of the structure and functions of the individual portions of the spinal units, of the

manner in which they are related to each other, of the pathological changes to which they are liable, and of the derangements of function which result therefrom. The description of the anatomical and physiological features of the different spinal segments, as far as they are at present known, is clear and concise, and admirably illustrated.

The second chapter deals with the pathology of the spinal segment. The author classifies the diseases to which the cord is liable as intramedullary and extramedullary. The former he subdivides into (a) primary systemic lesions, in which the disease is limited to a definite physiological tract, and is generally bilateral and symmetrical, and not dependent upon any previous organic change (diseases of the anterior cornua, the crossed pyramidal tracts, and the postero-external, or Burdach's columns); (b) the secondary degenerations, or systemic diseases, which are owing to previous disease of other portions of the nervous system (affections of the crossed and direct pyramidal tracts, and of the postero-internal or Goll's columns); and (c) indiscriminate lesions, which are not confined to definite physiological tracts, but may affect any portion of the transverse section of the cord. To this latter class belong the different forms of myelitis, simple non-inflammatory softening, hæmorrhage and tumours of the cord, and disseminated cerebro-spinal sclerosis. Extramedullary diseases are the several varieties of spinal meningitis. Of Pott's disease of the vertebræ, tumours in the spinal canal which proceed from the bones, membranes, or nerve-roots, but not from the cord itself; injuries, such as fractures and dislocations of vertebræ, wounds, and hæmorrhage into the spinal canal—the pathological anatomy and the symptoms immediately resulting from them are here fully described and illustrated.

The most important chapter of the book, however, is the third, in which the author describes the method of case-taking, and gives a summary of symptoms met with in diseases of the cord, as well as a general plan of diagnosis, prognosis, and treatment. Space forbids us to enter fully into this portion of the work, more especially as the author has nowhere carried conciseness further than here; suffice it, therefore, to say that the reader who has thoroughly digested the statements contained in this chapter, will rarely, if ever, meet with any difficulty in the diagnosis of an individual case of spinal disease. The fourth and last chapter gives a short but full description of the individual organic diseases of the cord, their diagnosis, prognosis, and treatment.

Although Dr. Bramwell's book does not contain any new discoveries, or fresh pathological, diagnostic, and therapeutical facts, we are nevertheless bound to say that, by the peculiar treatment of its subject, it lays claim to originality. We do not as yet possess, either in English or foreign medical literature, a treatise on the diseases of the cord, where we find, in a comparatively small compass, the correlation of normal and pathological anatomy and physiology on the one hand, and the clinical phenomena of disease on the other hand, presented to us in so striking and complete a manner. Dr. Bramwell has not given us any dry bones, but real flesh and blood; and great praise is due to the skill with which he has worked up his subject.

JULIUS ALTHAUS, M.D.

Récherches Cliniques et Anatomico-Pathologiques sur les Affections Cutanées d'Origine Nerveuse. Par HENRI LELOIR. Paris: A. Delahaye et E. Lecrosnier. 1882.

Clinical and Anatomico-Pathological Researches on Cutaneous Affections of Nerve-Origin. By HENRI LELOIR.

M. LELOIR has brought together, in a volume of 200 pages, a number of observations which bear on the important question of the influence of the central and peripheral nervous system on the development of lesions of the skin. The author has devoted great care to the preparation of the work, which contains an exhaustive but concise account of all that has been published on this subject during the last few years; and recent English, American, German, and French medical literature have been all carefully scrutinised in the collection of materials. Perhaps the most important parts of the book are, however, those which give the results of M. Leloir's own observations.

The author endeavours to show that, in certain affections of the skin, which have been by many authorities, and more particularly by French physicians, regarded as being directly caused by disorders of the nervous system, there are really important pathological changes to be found in the nerves of the affected part. His examinations were made on nerves treated by osmic acid and stained by picro-carminate of ammonia, and the appearances then observed are portrayed in well-executed chromolithograph plates. He believes that he has demonstrated clinically and by microscopic examination that, in certain cases, vitiligo, ecthyma, pemphigus, cutaneous gangrene, and perhaps ichthyosis, are affections which have a nerve-origin, and are therefore to be brought within the same category as other cutaneous diseases in which a nerve-origin is recognised, viz., certain cases of acute pemphigus, leprosy, *mal perforant*, and bed-sores. In a case of vitiligo, for example, in which a small portion of skin was excised, it was found that the nerve-filaments contained a number of nerve-tubes considerably altered (approximately about 3 in 30) and showed very clearly the lesions of atrophic neuritis. In some tubes the axis-cylinder had completely disappeared, the myelin had separated into drops of various size, and the sheath of Schwann enclosed a substance which the picro-carmin stained yellow—a substance which is found in degenerating nerves. In those tubes in which the changes were more advanced, there was not only disappearance of the axis-cylinder, but the myelin had also completely disappeared; the sheath of Schwann alone persisting, and showing nuclei stained by the carmine in greater number than is found in the normal condition.

It is on analogous changes found in other diseases that M. Leloir bases his views. Before they can be accepted to the full extent advanced by the author, the subject must receive much more attention than has yet been given to it; notably, the condition of the nerve-tubes in the nerves of the healthy skin requires a more exhaustive study. But the author has done excellent service in opening up the question, and in pointing out the lines on which further work must be done. A number of most interesting cases are related in the volume, and the references are very complete. The book is well worthy the attention of all who are interested in the pathology of the skin and nervous system. G. THIN, M.D.

The Diagnosis and Treatment of the Diseases of the Eye. By HENRY W. WILLIAMS, A.M., M.D., Professor of Ophthalmology in Harvard University, etc. London: Sampson Low and Co. 1882.

A CAREFUL examination of this work leads us to a distinctly favourable opinion. The author's individuality is strongly marked, and it impresses itself more particularly upon his methods of treatment, in which, on this account, he appears rather inclined to dogmatise. But we must admit that his recommendations appear to be, in all cases, the result of much and mature thought. He is very severe on the use of acetate of lead, and would exclude it from ophthalmic therapeutics. He speaks of counter-irritation, whether by blisters or setons, in much the same way. He goes out of his way to denounce poultices as dangerous. In these points we cannot entirely agree with him, notwithstanding that the injudicious use of these remedies has undoubtedly done a good deal of harm. He speaks highly of pilocarpine in that frequently troublesome affection, episcleritis, and in ulcers and wounds of the cornea, both as a local application, and subcutaneously. He prefers, and in this we are inclined to agree with him, paracentesis of the cornea in purulent infiltrations to section through the affected region. If the operative treatment of staphyloma corneæ, by excision of its apex, should yield in other hands results as good as he has obtained, this will constitute a most valuable operative procedure, as, in a large number of cases, the inapplicability, as well as the inefficiency of iridectomy, make themselves apparent. From this operation, as from that of removing the entire cornea, or even the cornea and ciliary processes, he does not appear to have had bad results; and he has successfully practised evacuation of the contents of the sclerotic in certain cases where they were undergoing destructive inflammation, and even where a bony cup was formed in relation with the choroid.

He doubts, and apparently with reason, the influence of synechiæ in causing a recurrence of an iritis. He is but moderately prepossessed in favour of sclerotomy, reserving it for the cases where there is little or no prospect of restoring vision. He has good results from section of the optic and ciliary nerves as a substitute for enucleation.

The book is well printed. It is a misfortune that it has so few woodcuts, as its ophthalmoscopic plates, though of good quality, are not numerous. We venture to think that it would also be improved by a formulary. W. A. BRAILEY, M.D.

NEW INVENTIONS.

A NEW FORM OF CATHETER FOR WASHING OUT THE BLADDER AND URETHRA.

IN order to deal with associated affections of the bladder and urethra by mechanical treatment, Dr. Adolf Fischer of Buda-Pesth has devised an instrument with which the surgeon can irrigate those two organs in succession, without being under the necessity of withdrawing it and introducing it a second time, at a single sitting.

This instrument, which is described and illustrated in the *Illustrirte Monatschrift der Aerztlichen Polytechnik*, Heft 8, 1882, consists of a double catheter, one part of which slips into the other, so as to form

an apparently single instrument. The outer part is 18 centimètres in length and No. 18 or 20 in size (Charrière's scale). It is well curved, and presents the orifice on the concave side of the beak. About $4\frac{1}{2}$ centimètres from the vesical end of this outer catheter are several openings, varying in size. The extra-vesical end of the catheter is conical and furnished with a concave disc for closing the external urethral orifice, above which is a tubular appendage, about half a centimètre in length, furnished with a small peg for fixing the inner catheter. On the upper margin of the concave disc is a small notch, which indicates the position of the catheter as it lies in the bladder and urethra. On the posterior surface of the extra-vesical end, just behind the conical portion of the catheter, are several orifices, some large, others small. The inner catheter is patent and truncated at its lower extremity, and is provided with a large oval orifice near this, and also with another orifice near the upper extremity. The length of this inner catheter from its vesical extremity to the forked part at O is $15\frac{1}{2}$ centimètres, and the instrument is about half a centimètre in thickness. The anterior portion of this inner tube, along an extent of $2\frac{1}{2}$ centimètres, has a double channel. The opening at N serves for the discharge of fluid from one of these channels. The cup-like appendage of this tube serves for the reception of the top of the outer catheter, and the slit at R permits of a rotatory movement of the catheter from right to left, or in the reverse direction. The anterior—the extra-vesical extremity, divides into two curved tubes (SS¹), the superior one of which communicates with the whole length of the catheter, and transmits fluid from the irrigator towards its visceral end, whilst the lower tube communicating with the small channel that is cut off from the rest of the inner catheter at P, transmits fluid towards the urethra. For the purpose of special injection into the urethra, a second small tube (T) is added: this communicates with a caoutchouc tube furnished with a stop-cock. When the inner is inserted into the outer catheter, the surgeon, taking the concave disc between the index finger and thumb of the left hand, by rotating this can use the double instrument either as a simple vesical, or is both a vesical and an urethral catheter. When the solid wall of the inner tube is applied to the openings in the outer tube, the extra-vesical orifices are closed, and only the opening in the beak of the larger tube remains free. After the desired amount of fluid has been injected into the bladder, and the entrance of fluid into the catheter has been temporarily arrested, the inner tube may be turned so that its oval orifices correspond to the small orifices in the outer catheter. The fluid then streams out through the openings, and, after having passed along the urethra, passes into the inner tube again, and then flows away. When the upper curved tube, communicating with the irrigation vessel, is in a line with the notch in the concave disc, the instrument is quite free. If it be thought necessary to retain the injected fluid for some time in contact with the mucous membrane of the urethra, the discharge of this fluid may be arrested by fixing a stop-cock to the discharge tube.

ADEPSINE AND ADEPSINE OIL.

Adepsine is a new petroleum compound, somewhat resembling vaseline in general appearance, but

quite white. It is perfectly smooth and bland, and is destitute of even the faintest odour. It will mix with almost anything, and has this great advantage over lard, that it can never, under any circumstances, become rancid. There is no doubt that for ointments it is the basis of the future. Adepsine oil—a colourless liquid also devoid of smell—is an admirable solvent, and is much employed in the preparation of liniments and for toilet purposes. The excellence of these articles is to some extent accounted for by their being made under the personal direction of Professor Fresenius, and in London the preparations have been placed in the hands of the enterprising firm of Willeringhaus, Klinker and Co., Hamsell St., E.C., who are the sole agents for England.

MISCELLANY.

INDUSTRIAL DISEASES.—It has been observed that the manufacture of bichromate of potash has a singular effect upon the nose, manifesting itself in a curious manner. A little hole is formed on the septum of the nose, and increases gradually until the partition entirely disappears, with the exception of its lower part, so that to a superficial observer there is nothing except a little outward depression. It is noticed that, as soon as the partition is destroyed, the process appears to stop there, neither the lungs, air-tubes, nor throat being in the least degree affected. Some workmen at the chrome factory in Russia, where the disease has been chiefly watched, have been employed for ten years and remained unaffected, while with others the hole in the nose begins to be formed after one month's work. But that the disease is something more than an individual peculiarity, is evident from the fact that an inspection of all the hands proved that more than fifty per cent. of the men had diseased noses. The early symptoms are a slight tickling of the part affected, followed by bleeding, but with no uncomfortable feelings; and, in fact, the destructive process is painless.

THE MICROSCOPIC PREPARATION OF PARASITES.—M. F. Balzer, Director of the Laboratory of the St. Louis Hospital, gives the following directions for quickly colouring and preserving parasites. The section or scraping must be washed in ether or alcohol, in order to remove all fatty matter. It is then placed in a saturated alcoholic solution of eosine; the time it should remain depends on its thickness—from half an hour to an hour is sufficient. The excess of eosine is removed by washing the section in distilled water, or, better still, in a solution of potash (40 per 100). The section remains macerating in the potash solution, and is placed on a glass slide under a covered glass. Every day a drop, or two drops, of the potash solution is added to replace loss by evaporation. After a few days, sometimes a few hours, the section is sufficiently transparent and the parasites thoroughly coloured by the eosine. The section is then treated with a saturated solution of potash acetate, which is introduced at the edge of the cover glass. This is fixed by a border of paraffin or wax. The sections thus mounted are preserved for an indefinite period, if care be taken not to press on them in the course of preparation. The same method colours microphytes contained in the liquids of the animal economy.

PSYCHOLOGY AND WITCHCRAFT.—Dr. George M. Beard recently read a paper before the New York Academy of Sciences, the subject being 'The Psychological Explanation of the Salem Witchcraft Excitement and the Practical Lessons derived therefrom.' A large number of members and their friends attended the meeting. On the blackboard behind the platform was drawn an illustration, which Dr. Beard used to exemplify various conditions of the convalescent brain. He opened the lecture by pre-

senting to his audience two boys, both of whose minds were diseased. He had scarcely passed his hands over the face of the older lad, when the latter fell upon the stage in convulsions. He then brought forward the younger boy, who, on being questioned, looked intently at the top of the back of President Newberry's chair, where, he said, he saw a yellow bird. A moment later he was again asked what he saw, and he replied that he saw a hog on the platform, and he gazed intently in the direction where he thought the animal was. Dr. Beard put his hand on the boy's head, and said to the audience: 'They are here; he sees what he wishes to see.' The lecturer then went on to say that herein lay the witchcraft which cost nineteen persons their lives in Salem in 1692, and in the years preceding brought death to a million of persons in Europe. In 1695, the people of Salem began to feel that, after all, they had done wrong. Dr. Beard said that the condition of Whitaker at West Point was something similar to that of the older boy on the stage when they attempted to wake him up, and the evidence that proved his innocence was that which was used to prove him guilty. Several times during the lecture, Dr. Beard referred to the trial of Guiteau, and pronounced him to be insane for the past twenty years. At the close of the paper, an interesting discussion ensued, and several questions were propounded to the lecturer. In the course of his answers, he said that spiritualism and kindred issues were signs of a progress in the brain from the mental delusions of witchcraft. The two boys on the platform were still asleep when the Academy adjourned, and were awakened with some difficulty.

THE DIFFUSION OF BACTERIA.—The researches of M. Pasteur and Darwin have shown how earthworms may aid the diffusion of small organisms, some of which may produce disease. Professor Schnetzler states that the dejections of earthworms always contain numerous living bacteria and their germs (the hay bacterium included). It is clear that bacteria in enormous quantity float in the air about us; and we have at easy command, Professor Schnetzler points out, a small apparatus traversed by about 8,000 cubic centimetres of air per minute, which may inform us as to those floating germs. This is no other than the nasal cavity, on the mucous surface of which air-particles are deposited. To observe these he advises injecting the nose with distilled water (completely sterilised) by means of a glass syringe previously calcined. The liquid so obtained is put in one perfectly clean watch glass and covered by another. With a microscope magnifying 700 or 800, one finds among various particles in the liquid some real live bacteria. If the liquid be kept a few days in a clean glass tube hermetically sealed, the bacteria are found to have increased very considerably. *Bacterium termo*, *vibrio*, *spirillum*, *bacillus subtilis*, even some *infusoria*, and spores and fragments of fungi are seen. Professor Schnetzler has further successfully cultivated the organised germs by means of a mixture of gelatine and distilled water. It may be asked, why do not those bacteria in the nasal cavity always multiply and develop and penetrate to the windpipe and lungs? To which the answer is their progress is doubtless opposed by the vibratory movements of cilia in the air passages, and the weakly alkaline reaction of the nasal mucous may, it is also suggested, be unfavourable to some of them. Cohn has proved that bacteria producing acid fermentation perish in liquids with alkaline reaction. Infectious bacteria may, however, multiply to a formidable extent on living mucous surfaces, witness the growth of the *micrococcus* of diphtheria, brought by the air into the air-passages; also the *bacterium* of anthrax. The *bacillus* of tubercle, as Koch has lately shown, may be transmitted from one person to another by the air passages. Professor Schnetzler thinks hay fever may also be due to bacteria entering the nose. While the development of bacteria on normal mucous surfaces is usually limited, millions of them are found in the dejections of healthy children.

The London Medical Record.

SCHMIEDEBERG ON OXIDATION, DECOMPOSITION, AND SYNTHESIS IN THE ANIMAL BODY.

Two papers by Professor Schmiedeberg, one on Oxidation and Synthesis in the Animal Body (*Archiv für Exper. Patholog. und Pharmak.*, Band xiv, S. 288); and one on Decomposition and Synthesis in the Animal Body (*Ibid.*, S. 379), must be considered as forming a contribution of the highest importance to the study of tissue-metamorphosis in the animal body. They are evidently the outcome of several years' assiduous and careful research; and the high position occupied by the author among German physiologists and pharmacologists is a sufficient guarantee for the correctness of his results and of his conclusions.

He begins with the statement that the various changes involved in tissue-metamorphosis consist in decomposition, oxidation, and synthesis, singly or in combination; and he proceeds to ascertain experimentally how these chemical processes are produced within the body. The method for the most part employed is that which was first described by the author and Bunge in their investigation on the synthesis of hippuric acid, and consists in passing defibrinated and oxygenated blood, containing the substance whose chemical change it is wished to observe, through the blood-vessels of a freshly isolated organ—kidney, liver, lung, etc. The mere effect of the contact of the substance with the blood is previously ascertained; and, by comparing this with what occurs when the mixture is allowed to stream through the organ, the action of the organ or tissue is arrived at. In order to examine the oxidising power of the body, compounds of the aromatic series, as benzyl-alcohol, salicyl-aldehyd, toluol, and benzol, were chosen, and experimented with as explained; and it was found that these substances were not oxidised by atmospheric oxygen in the presence of water; but if a dilute solution of carbonate of soda, or blood, were added to the water, oxidation to a small extent occurred. If, however, the aromatic body were mixed with oxygenated blood, and passed through the kidney or lung, the oxidation was nearly a thousand times as great as that produced by alkaline water or blood. It is evidently not the blood itself which originates the oxidation. The oxygen of the blood may be the immediate source of the oxidation; but contact with the tissues is necessary for the purpose of rendering the oxygen active, probably converting it into an ozonic or similar condition; or it may be that the tissues act on the oxidisable substance itself, rendering it readily capable of uniting with oxygen. The latter is more probable, as, were the former the case, phosphorus and bodies much more oxidisable than aromatic compounds outside the body, ought to be quickly oxidised within the body. But this is not so. This form of oxidation in the body may be regarded as a synthesis of the aromatic body and oxygen, a molecule of water being evolved. The author takes exception to the statement by Schaffer that phenol (carbolic acid) is in part consumed in the body. No phenol is consumed. It appears in the urine united for the most

part with sulphuric acid, and the remainder with glyco-uronic acid. Free phenol is never met with in the urine.

The greatest interest, however, attaches to the experiments with nitrogenous substances, of which benzylamine was taken by the author as a type. This substance, mixed with blood, and passed through the kidney of the dog, underwent no apparent change; but, when it was passed through the kidney of the pig, benzoic acid and a trace of hippuric acid were formed. The addition of glycocholl did not increase the quantity of hippuric acid. Other experiments showed that, if, to begin, benzoic acid were mixed with the blood along with a little glycocholl, even in the presence of benzylamine, hippuric acid was largely formed; and it seems almost paradoxical to add that further experiments proved that the kidney-substance and many other tissues, and even the blood, were capable of decomposing hippuric acid, and forming benzoic acid; or, in other words, effecting exactly the reverse of the previous chemical change. The decomposition of hippuric acid, the author has found, depends on the presence of an unformed ferment, which he has named histozyme. This ferment he has separated from a glycerine extract of the pig's kidney by precipitation with alcohol. It possesses the usual characters of enzymic ferments. He claims for it a most important and comprehensive rôle in tissue-metamorphosis. He believes that it is by means of this ferment that the decomposition of all nitrogenous matter is effected in the body, and he promises another series of experiments by which this claim will be established. The decomposition is aided by the oxygen of the blood. A solution of histozyme and benzylamine, mixed with blood and passed through the kidney of the dog, produced benzoic acid; without histozyme, the dog's kidney cannot effect this decomposition. Probably by the action of histozyme on benzylamine, benzyl alcohol and ammonia are first formed, and the former becomes oxidised by the oxygen of the blood to benzoic acid, which in certain cases in the presence of glycocholl forms hippuric acid, whilst the ammonia uniting with carbonic acid forms urea.

If the decomposition of nitrogenous substances in the body is due to the action of histozyme, then, as the author remarks, the extent of the decomposition will depend on the quantity of the ferment. An increase of the ferment will be accompanied by an increased decomposition of nitrogenous matter, and a true febrile condition must follow. This he has proved; for a dog, into whose circulation a solution of pure histozyme had been injected, showed all the symptoms of malaise and fever. In conclusion, the author suggests that many febrile states may be due to an increase in the quantity of histozyme within the body, or to an augmentation of its activity.

MATTHEW HAY, M.D.

ON THE FORMATION OF RED BLOOD-CORPUSCLES BY BUDDING FROM RED NUCLEATED CELLS.*

In a valuable paper recently published by M. Malassez on the subject of the formation of red blood-corpuscles by budding from red nucleated

* Sur l'Origine et la Formation des Globules Rouges dans la Moëlle des Os. Par L. Malassez. *Arch. de Phys.*, Jan. 1882.—Pathology of a Sero-Sanguineous Cyst from the Neck of a Dog: Mode of Origin of Red Blood-corpuscles. By Ch. Creighton, M.D. *Jour. of Anat. and Phys.*, April 1880.

cells, the work of previous investigators is discussed and new views of importance are put forward. Similar observations made two years previously by Dr. C. Creighton, which have not attracted much attention, and of which M. Malassez seems to be unaware, supply additional facts, and afford an independent evidence in the same direction.

The nucleated red corpuscles of the bone-marrow were first described by Neumann* in 1868. He noticed that they resembled the nucleated red corpuscles of foetal blood, and he assumed that they were intermediate forms between the white and the red corpuscles, and hence that the bone-marrow was a seat of origin of blood-elements. A month later, Bizzozero† announced the same discovery, and stated that he had, moreover, observed all forms of change passing from the white to the red corpuscle. He also described cells containing red corpuscles and pigment granules (similar to those already described by Kölliker in the spleen), from the presence of which he concluded that red corpuscles were destroyed as well as developed in the marrow. Previous to Neumann's discovery, Robin had partly described the red nucleated cells of the marrow under the name of medulla-cells. The name medulla-cells M. Malassez objects to, as red nucleated cells are also found in foetal blood, in the liver, and in the spleen, etc. Rindfleisch‡ calls them hæmatoblasts. This term has been, however, used to describe so many different elements, that, though actually the most applicable, it is unadvisable that it should be used. Obrastzow calls them 'hæmoleucocytes', to signify their relationship to both red and white cells; this relationship on both sides is not, however, proved. Malassez prefers to call them simply red nucleated cells, or the cells of Neumann.

The animals chiefly examined by Malassez in his research have been new-born cats, rabbits of seven and ten days and six weeks old, calves and goats, and infants a week old. The long bones were preferred, chiefly the femur, tibia, and humerus.

Methods of Examination.—Examination of the pure medullary juice, and of fragments of the marrow dissociated with needles without the addition of any reagent, has the great advantage of showing the elements in a living state; but the elements change so rapidly, and are so closely pressed together, that their study by this method can be but short, and is beset with difficulties; it moreover precludes the possibility of using staining reagents. On dissociating in .50 or .75 per cent. solutions of sodium chloride, no better results were obtained, the elements undergoing change and the red cells losing their hæmoglobin very rapidly; a 5 per cent. solution of sodium sulphate was not found more preservative; subsequently a mixed solution, containing 5 per cent. of sodium sulphate and .05 of corrosive sublimate, was found the best fluid in which to dissociate the marrow; the elements were, however, slightly contracted by it, and those which contained much hæmoglobin were rendered brittle. Dissociating in a 1 per cent. solution of osmic acid also gave good results, the excess of acid, after fixing, being washed away by distilled water; finally it was found, however, that the most successful plan was to dissociate the marrow without any reagent, and, to expose the separated cells, for

about one or two minutes, to the action of the vapour of osmic acid. The preparation should now be partly dried by to-and-fro movements in the air; after which it can be stained with picro-carminate, or with hæmatoxylin and eosin. With the former, the nucleus becomes red, the hæmoglobin yellow; with the latter, the nucleus violet, the periphery red. Preparations made in this way can be preserved in glycerine or Canada balsam. Minute directions are given in M. Malassez's paper as to the precautions to be adopted. The preparations obtained by dissociation were compared with sections cut after submitting fragments of the marrow to the successive action of a solution containing 5 per cent. of sodium sulphate and .05 per cent. of corrosive sublimate, of distilled water, picric acid—if there be any bone to soften—gum and alcohol.

Theories.—Hitherto there have been but two theories before the world as to the formation of red corpuscles from the red nucleated cells of the bone-marrow; first, that supported by Kölliker and Neumann, that the nucleus disappears by absorption; secondly, that of Rindfleisch, that the nucleus is expelled. Some, again, admit both theories. If the first theory were correct, all transitory forms between the red nucleated and non-nucleated cell ought to be found in the marrow. To settle this question, M. Malassez made a special examination of the red blood-corpuscles and red nucleated cells of those animals—the goat and rabbit particularly—in which there is a great disparity in size between the two elements. In the goat, the red blood-corpuscles are small, measuring not more than $3.7 \mu^*$ in diameter; but the red nucleated cells of the marrow are much larger, and measure from 5μ to 10μ in diameter. The change in size from the larger to the smaller element would obviously here be very apparent, but M. Malassez was unable to discover a cellular form that could be regarded as one transitory between the two elements. It might be contended that the change took place very suddenly, and could not be observed by microscopic methods. To throw light on this point, M. Malassez estimated, by Welcker's† ingenious method of making models of the corpuscles, the cubic size of the red corpuscles and of the red nucleated cells after eliminating the nucleus. In the rabbit, it was found that the red corpuscles were 2.12 times smaller than the protoplasm of the smallest red nucleated cells, and 8.7 times smaller than the largest red nucleated cell. In the goat, the red corpuscles were from 3.9 to 19.9 times smaller than the protoplasmic periphery of the red nucleated cells of the marrow. Such a change in size could not occur by any sudden process of degeneration. This theory, therefore, does not bear rigorous investigation.

As to the second theory, M. Malassez states that, after repeating Rindfleisch's work, he is of opinion that the phenomenon of the expulsion of the nucleus is purely physical and *post mortem*; that, on dissociating the marrow without any reagent whatever, and preserving it in osmic acid vapour, as already described, this extrusion of the nucleus is not observed, but it may be seen if the medulla be not quite fresh, or if it be dissociated in a reagent which slightly contracts the elements. Moreover, if Rindfleisch's theory were correct, intermediate forms ought to be found in the bone-marrow of the goat be-

* E. NEUMANN.—Ueber die Bedeutung des Knochenmarkes für die Blutbildung. *Centralblatt für die Med. Wiss.*, Oct. 1868, p. 689.

† BIZZAZERO.—Sulla Funzione Ematopoitica del Medollo delle Ossa. *Gazz. Med. Italiana Lomb.* Nov. 1868.

‡ RINDFLEISCH.—*Arch. für Mikr. Anat.*, 1880, p. 22.

* The sign μ is used to denote a micromillimetre, or thousandth part of a millimetre = about 1-2500th inch.

† H. WELCKER.—Grösse, Zahl, Volum, Oberfläche und Farbe der blutkörperchen beim Menschen und bei Thieren. *Zeitschrift für rat. Med.*, 1863, Band 26, p. 257.

tween the red corpuscles and the large red nucleated cells, the protoplasm of which has been shown to be from four to twenty times as large as the former.

Some years ago, MM. Malassez and Picard* discovered, in the splenic pulp, cells which bore as buds on their surface bodies having the same size, colour, refraction, and homogeneity as the red corpuscles; and these buds were supposed to be red blood-corpuscles not yet separated from their parent cell. Finding now, again, in the medullary juice, similar growths situated on the cells of Neumann, M. Malassez has arrived at the opinion that the red nucleated cells do not either lose or expel their nucleus, but that their protoplasm gives origin to a bud which, when detached, forms a red blood-corpuscle. In the bone-marrow of the goat, the cells of Neumann may be found bearing one, two, or even three buds, which are either sessile or supported by a short and broad pedicle. They are observed in different stages of development, measure from 2.25μ to 2.5μ in diameter, are nearly spherical, and have a cubic volume of 7μ . They are composed of a substance which, like the protoplasm of the cell, is homogeneous, refractile, and yellow; becomes discoloured by water, stains red with eosin, and refractile yellow with picric acid. This substance has, in fact, all the characters of the mother globular substance. It has, also, its suppleness and elasticity; for, if the nucleated cells be compressed in the preparation, they become deformed, the nucleus, however, showing greater resistance. In the rabbit, the difference in size between the red blood-corpuscle and the red nucleated cell of the bone-marrow is not so great as in the goat. The cell throws off, moreover, only one bud, which measures from 4.5 to 5μ in diameter, and has a cubic volume equal to that of the red corpuscle of the rabbit. The fully developed bud, in fact, always corresponds in cubic size to the normal red corpuscle of the animal in question. The buds have, moreover, the same physical and microscopical characters as blood-corpuscles; and it is justifiable to think that, when separated from the mother cell, they are red blood-corpuscles, from which they differ only by the fact that they are round bodies and not biconcave discs. It might be objected that the large buds are simply red corpuscles adhering to the cells; this objection cannot, however, be urged against the smaller buds, which, in well-made preparations, are only found adherent to the nucleated cells.

With regard to the means by which the bud is separated from the parent cell, there is still much doubt. In explanation of the change in form from spherical to discoid, many intermediate forms are found, but no one corpuscle was seen undergoing the change, the inverse process of change from biconcave discs to spheres may often, however, be observed in the blood. In passing from the spherical to the biconcave discoid form, the corpuscles seem to undergo some diminution of cubic size.

Origin of the Red Nucleated Cells.—M. Malassez considers that the nucleus of the red nucleated cells is simply composed of a fluid deposited in a protoplasmic cavity, which cavity is often spherical and regular, but more generally traversed by protoplasmic septa and trabeculae, in which case the nucleus appears anfractuous and stellate; there is no nuclear envelope, and the protoplasm is in immediate contact with the nucleus. Red nucleated cells multiply by scissiparity.

On the question of the origin of the red nucleated cells, there is the greatest divergence, and even confusion of opinion. The suggestion that these cells are the result of changes which take place in the ordinary multinucleated white corpuscle, a thesis which has been defended at various times by Neumann,* Bizzozero,† Obratzow, Kindfleisch, and others, Malassez declares to have no facts on which it may be supported. According to the supposition of hæmoglobic degeneration of leucocytes of Pouchet,‡ the leucocytes are immobilised in the bone-marrow, and undergo degeneration; their body becomes hyaline, yellow, and refractile; the nucleus atrophies and disappears, and the body itself is also finally dissolved. To this M. Malassez replies that the hyaline leucocytes are most probably red cells which have lost their hæmoglobin; that far from the nucleated cells showing signs of degeneration, they show signs of great vitality; and, instead of the presence of hæmoglobin being significant of degeneration, it proves that these cells are destined for a high and special function.

According to the theory of Foa and Salvioi,§ the red corpuscles are produced from the large cells with budding nucleus of Bizzozero; these cells give origin to a mass of small cells, called by them hyaline cells, which become charged with hæmoglobin, and thus transformed into red cells. This process they state to have observed not only in the bone-marrow of embryos and new-born children, but also in the liver, spleen, and lymph-glands of the fetus. M. Malassez says he has not been able to confirm these observations.

The following types of medullary cells M. Malassez has been able to distinguish in the bone-marrow:—

1. A cell containing one or two nuclei, with a protoplasm resembling that of the red nucleated cell, except that it is less coloured and less hyaline; it is also smaller, measuring from 11μ to 15μ in diameter; the nucleus is larger, stains a lighter colour, and is penetrated by long processes of protoplasm, so that it has a coraliform and reticulated appearance. These cells M. Malassez calls hæmoglobic cells with a coraliform or reticulated nucleus.

2. Larger cells, having a diameter of from 13μ to 16μ ; the protoplasm is homogeneous, but finely granular, and stains feebly with eosin. The nucleus is single, spherical, relatively very large, not arborescent, and uniformly granular; it stains slightly with hæmatoxylin, so that it is ill-distinguished from the protoplasm.

3. Cells of the same size and shape as the preceding, but in which a nucleus cannot be distinguished. Their substance is finely granular and perfectly homogeneous, and stains very slightly with eosin and hæmatoxylin, and of the same tint as the nucleus of the preceding; in some, the periphery is slightly redder than the centre, as if there were a thin protoplasmic layer round an enormous nucleus. In these cells, M. Malassez considers that the nucleus is diffuse, infiltrating the protoplasm more or less completely.

M. Malassez considers that these various cells, and the red nucleated cell, represent phases in the development of the same element, the earliest being the

* NEUMANN.—*Arch. der Heilk.*, 1869, pp. 177, 78; and 1874, pp. 466.

† BIZZOZERO.—*Morgagni*, 1869, pp. 8-10; and *Centralblatt für die Med. Wiss.*, 1881, p. 124.

‡ POUCHET.—*De la Dégénérescence Hémoglobique de la Moëlle des os. Soc. de Biologie*, 15 Mars, 1879; et *Gaz. Méd. de Paris*, 1879, p. 184.

§ FOA and SALVIOI.—*Sull' Origine dei Globuli Rossi del Sangue. Arch. p. l. de Medie.*, 1880, f. 4, p. 1.

cell with diffuse nucleus, the latest, the specialised red nucleated cell; that the nuclear substance diffused at first through the protoplasm gradually gathers itself together and retracts into a central body, whilst at the same time the slightly granular and colourless protoplasm becomes hyaline and elastic, and absorbs or develops hæmoglobin, until the condition of the typical red nucleated cell is reached.

M. Malassez is of the opinion that the protoplasm, and not the nucleus, is the active element of the cell. He considers that the nucleus may play the part of a nutritive fluid, and that, compressed by the active protoplasm, it is driven first into protoplasmic-canals (coraliform and reticulated nucleus), the walls of which melting down, a central cavity is finally formed, in which the nuclear substance is lodged; and that division of the nucleus is brought about by the activity of the protoplasm, the vitality of which is shown, moreover, by budding.

Besides these cells, M. Malassez also observed cells with a large nucleus, which stained slightly a violet tint with eosin and hæmatoxylin, the peripheral protoplasm often remaining colourless, but showing granules which stained deeply with eosin; these granules did not seem, however, to be composed of hæmoglobin, as they did not discolour in water.

On the question as to what becomes of the red nucleated cells exhausted by budding, and what relation do the cells of Neumann hold to the medullary blood-vessels, M. Malassez is unable to throw any light. Besides the method of producing red blood-corpuscles by budding, M. Malassez was able to confirm the observations of Heitzmann* and others,† by finding that in cartilages undergoing ossification, in inflamed bone, and in tumours of myeloid plates, red corpuscles are found within certain giant-cells or myeloid plates, which latter are, in fact, vaso-formative cells. Here, again, the red corpuscle is a protoplasmic bud, but projected within the mother-cell, within which it remains for a time after separation.

To sum up, there are in the bone-marrow two modes of formation of red blood-corpuscles: 1. The exogenous, by which the corpuscles spring from the cells of Neumann; 2. The endogenous, by which the corpuscles are developed from the protoplasm of myeloid plates which have attained the state of vaso-formative cells. In the red marrow, the former, the true hæmatopoietic method prevails; the latter is present wherever new blood-vessels are formed, as during development, in inflammation, tumours, etc.

In animals which have nucleated red blood-corpuscles in the adult state, M. Malassez has been able to trace, in the bone-marrow, cells passing from the pale round cell with diffuse nucleus to the red nucleated cell, which, instead of budding, flattens and elongates, and passes into the circulation. It is a cell arrested in its course of development into a specialised corpuscle, the function of which is respiration; in the non-nucleated corpuscle every molecule of its substance can fulfil its special function; in the nucleated, only the protoplasmic portion is available.

M. Malassez's paper is illustrated by careful

drawings of the red nucleated cells throwing off buds, and undergoing division of the nucleus, and of the different phases in the development of the nucleated cell.

Two years before M. Malassez published the above observations on the formation of red blood-corpuscles in the bone-marrow by budding from red nucleated cells, Dr. Creighton of Cambridge described, in a paper published in the *Journal of Anatomy and Physiology* (April 1880), a similar formation of red blood-corpuscles by budding from red nucleated cells in certain sero-sanguineous cysts. The paper passed unnoticed at the time, or was treated as an interesting exposition of one of the vagaries of nature; but Dr. Creighton's observations, read at the present time, in connection with the exact records of M. Malassez's research, throw much light on the still obscure subject of the origin of the blood-supply. The first cyst in which the phenomena of budding was observed, was removed from the neck of a retriever dog in July 1875, and was hardened in potassium bichromate and in spirit and water. The cyst wall was found microscopically to be composed of fibrillar ground-substance, interspersed with spindle-shaped cells. Around the wide capillary vessels these cells, increased enormously in number, were found changed in form and colour; they became round, cubical or polygonal; their protoplasm was clear or watery, and tinted with hæmoglobin; scattered throughout the ground-substance were groups of these coloured cells in less obvious relation to the walls of the vessels, but it was in these positions that their origin was best seen. Dr. Creighton calls these cells hæmatoblasts, for red blood-corpuscles are produced from them by a process of budding, and are then discharged into the centre of the cyst; the cystic cavity being itself the result of the instability of the hæmatoblasts and their consequent breaking down into blood-corpuscles, till finally the cavity becomes filled with blood, much in the same way as it would be with pus, if pus-cells were produced instead of blood-corpuscles. The process of budding is described thus. The nucleus of the hæmoglobin-tinted nucleated connective-tissue cell divides into several unequal fragments; this fission of the nucleus is accompanied, also, by division of the protoplasm, which forms a bud or excrescence, often attached to the parent cell by a filament or morsel of nuclear substance; or else it appears as a fully formed, though still attached, corpuscle at one side of the cell; these detached portions of hæmoglobin-tinted protoplasm are, at first, pear-shaped or spherical, but they afterwards become biconcave discs. The lymph-sinuses of the lymph-glands were also found filled with red blood-corpuscles, apparently derived from the hæmoglobin-tinted connective-tissue cells.

In two other tumours, taken respectively from the neck and hip of a dog, the same phenomenon of formation of red blood-corpuscles, by budding from red nucleated cells, was observed, but in a less active form.

In another case of a sero-sanguineous cyst, removed from under the skin between the scapulae of a middle-aged man, the formation of red blood-corpuscles from hæmatoblastic granulation-cells, and also from giant or vaso-formative cells (as has been described by Schöney, Ziegler, Heitzmann, Malassez, and others), was made out. This cyst had the characteristic structure of a granulating surface; only that, instead of the granulation-cells forming pus, they formed blood. Among the granulation-like

* C. HEITZMANN.—Studien am Knochen und Knorpel. *Wien. Med. Jahrb.*, 1872, p. 339-366, pl. 9, 10, 11.—Ueber die Rück- und Neubildung von Blutgefässen im Knochen und Knorpel. *Idem.* 1873, pp. 179-194, pl. 2, 3.

† SCHÖNEY.—Ueber den Ossifications-proces bei Vögeln und die Neubildung von rothen Blutkörperchen an des Ossifications Grenze. *Arch. für Mikr. Anat.*, 1876, v. 12, p. 243.

‡ LEBOUCCQ.—Recherches sur le Développement des Vaisseaux et des Globules Sanguins dans les Tissus Normaux et Pathologiques. Gand, 1876.

cells around the walls of the wide capillary vessels lighter spaces were observed, and in these spaces the circumvascular cells were seen to be larger and tinted with hæmoglobin. These cells were hæmatoblasts, though their protoplasm was not so clear, nor the hæmoglobin quite of the same tint as that of the hæmatoblasts of the blood-cyst. The development of corpuscles was also different; the red blood-discs did not bud off from the side of the cell as in the previous examples, but the whole cell—the nucleus being driven to one side, or having become invisible altogether—seemed to fall to pieces as a heap of blood-corpuscles. Scattered among these hæmatoblasts were also found giant-cells, which Dr. Creighton considers to be identical with the vaso-formative cells, described by him in the placenta of the guinea-pig.*

In Dr. Creighton's opinion, the tendency shown by the embryonic connective tissue cells of these cystic tumours to become hæmatoblasts, and give origin to red blood-corpuscles, is a revival of the blood-forming function of the mesoblast. This primitive and most important function of the mesoblast may be said to be the most deeply rooted tendency or 'memory' of embryonic connective tissue cells, and the first to assert itself in any return to the embryonic state of the tissue.

In other tumours examined, a glioma removed from the brain, a round-celled sarcoma from the aponeurosis over the scapula, a spindle-celled sarcoma from the fascia lata, lacunar-shaped centres of formation of red blood-corpuscles were detected between the tissue, intact and not in communication with vessels; these blood-islands recalled in many instances the illustrations of the area vasculosa in embryological text-books.

In these interesting researches, carried on quite independently by M. Malassez and Dr. Creighton, the twin sciences of physiology and pathology are seen to supplement and explain each other. M. Malassez has shown that, in the early life of the higher mammals, and throughout life in some of the lower, the bone-marrow is a seat of blood-formation, and that the red blood-corpuscles are produced by budding from red nucleated cells; but he fails to trace the red nucleated cell to its origin. Dr. Creighton demonstrates that in tumours, in which there is a return to the embryonic connective tissue condition, certain of the cells, acting under the impulse of the embryonic function of the mesoblast, take on a peculiar action, become larger, spherical, homogeneous and hyaline, and tinted with hæmoglobin, and develop either into hæmatoblasts which give off red blood-corpuscles by budding, or else grow into vaso-formative cells which break down into a number of corpuscles or develop into blood-vessels, hence confirming on the latter point the conclusions of former observers. Thus Dr. Creighton traces the red blood-corpuscle back to the embryonic connective tissue cell. In neither of the researches is the process of blood-formation of adult mammal life made out; but by demonstrating one origin at least of the normal blood-supply in lower and immature animals, and a return to the same method of production in pathological conditions in man and the higher animals, much light is thrown on the path of investigation which must ultimately lead to an accurate knowledge of the subject. ALICE M. HART.

ISENSCHMID ON CASES IN THE PRACTICE OF PROF. VON NUSSBAUM.

DR. ISENSCHMID of Munich has published, under the name of 'A Vade-Mecum for the Practical Surgeon', a first number of a series of sketches from the surgical practice of Professor von Nussbaum, consisting of short accounts of special cases, and a summary of the clinical observations made upon them. The following are some of the most valuable communications.

1. In a case of lymphatic swellings in the neck, after incision and evacuation of pus, iodoform was freely introduced into the wound with successful results. Its action is described as excellent in such cases, as it has both a chemical and a mechanical effect, setting up local irritation, and inducing granulation in the callous tissue. In the case of an officer who had a whole chain of glands simultaneously affected, the sprinkling of coarsely powdered iodoform into the wounds, after evacuation of pus, rapidly induced a complete cure. Iodoform should always be employed in coarse powder.

2. A small encysted tumour of the scalp was operated on in Dr. Heim's method. A fine incision being made into the tumour, a piece of caustic potash was introduced into it, and firm pressure applied for four minutes. After a fortnight's interval, the contents of the tumour had become saponified, and after removing the scab, the collapsed mass could easily be drawn out by forceps. This method is entirely painless.

3. The case of an old woman, who for three days had had fœcal vomiting, and in whom no hernia could be detected, called for decision between the operations of laparotomy and enterotomy. The latter operation was performed through an incision over the descending colon on the left side, the peritoneum being stitched to the skin before the bowel was brought through the opening and secured. The more serious risks of laparotomy, and the frequent difficulty of seizing the coils of intestine, render the other operation preferable, especially with the assistance of Listerian precautions.

4. Neuralgia of the infra-orbital nerve may be either centripetal or centrifugal. In cases of the former kind, resection of the nerve will be effective; but in the latter class, the result of the operation is less certain. In one such case, however, in which all the teeth, whether healthy or diseased, had been extracted from the right side, the following operation was performed. An incision through the skin, parallel to the lower margin of the orbit, was met by a deep vertical cut, exposing the infra-orbital foramen. With hammer and chisel, a small triangular wedge of bone was then removed, and the nerve drawn out, and a piece of it cut off. By slightly opening up the antrum of Highmore, the nerve-twigs can be reached and lacerated as they pass to their respective teeth. Failing success in this operation, it might become necessary to ligature the carotid, but this should only be resorted to after resection has failed. In ninety-five cases out of every hundred who seek relief for face-ache or swollen face, the starting-point of the mischief can be traced to a diseased tooth or fang, although patients themselves will suggest almost any other cause in preference.

5. In the reduction of an incarcerated hernia, the best of all accessory means is the production of deep anæsthesia by chloroform. Baths, tobacco clysters, ice-bags, etc., only serve to waste time in such cases. If reduction fail under deep narcosis, operative

* Further Observations on the Formation of the Placenta in the Guinea Pig, and 'The Physiological Type of the Giant-Cells of Tubercles and Granulations,' by Ch. Creighton, M.D. *Jour. of Anat. and Phys.*, vol. xiii, p. 173.

measures should be undertaken there and then. Taxis should never be used to excess. The dangers of operation are less serious under antiseptic precautions than are those of forced taxis. Small painful and inflamed incarcerated herniæ should be operated on at once. With the larger painless and non-inflamed tumours, there is always less urgency.

6. Amputation of the breast for fungating carcinoma may be undertaken without the use of the spray. In such cases, it is better to wash the wound thoroughly with chloride of zinc, and then to sprinkle it with salicylic acid and dress it with salicylic lint. The wound should not be closed by stitches. It may be necessary to employ compression to check subsequent hæmorrhage; and for this purpose an ordinary bath-sponge, squeezed dry and enveloped in gutta-percha tissue, forms an elastic pad which is always well borne. The whole breast should always be removed, even when a few outlying glands only are secondarily infected; but in cases where the disease has so far extended as to leave no margin of healthy tissue, it is better to leave it untouched. Cancer of the penis has the least, and cancer of the breast the greatest tendency to recurrence.

7. Prolapsus ani in a small child was treated by purgation and then opium, preparatory to the operation of returning the bowel by means of the index finger, and cauterising the sphincter in five or six places with a Paquelin's instrument; a perforated plate being used to prevent injury from being done to the surrounding parts.

E. CLIFFORD BEALE, M.B.

MARTIN ON THE PULSE-RATE OF THE ISOLATED MAMMALIAN HEART.

In a late paper, Dr. H. N. Martin (*Maryland Med. Journ.*, April 1882) describes some interesting physiological experiments as follows. A dog having been chloroformed, curarised, or placed under the influence of morphia, is tracheotomised; then the common carotids are exposed in the neck and tied, and a cannula is placed in the cardiac end of each vessel. Artificial respiration being started, the thorax is opened and both subclavians tied. Next, a wide cannula is inserted into the aorta just beyond its arch. After these procedures have been completed, the coronary arteries of the heart are the only arteries of the systemic circulation which remain open. The brain, spinal cord, trunk and limbs are no longer supplied with blood, and at once commence to die. The next steps are to tie the inferior cava just above the diaphragm, and the vena azygos near its junction with the superior cava, and the latter vein below the point where the left innominate vein joins it. All systemic veins are thus closed, except the coronary veins and the other small twigs from the heart itself opening into the right auricle. The pulmonary circulation is not interfered with at all. The heart and lungs are now the only parts of the body through which any circulation takes place.

A large cannula is now tied into the cardiac stump of the superior cava; this cannula is connected with a reservoir of (a) defibrinated dog's blood, (b) the same diluted with some 0.7 per cent. solution of pure sodium chloride in distilled water, or (c) with defibrinated calf's blood. The carotid cannulæ being opened, the blood in the heart and lungs (which would be apt to clot in a prolonged experiment) is washed out, and replaced by defibrinated blood supplied from the reservoir connected with the superior

cava. While this washing out is taking place, a thermometer is introduced into the left subclavian and its bulb pushed down into the aortic arch: in this position the thermometer is firmly tied; it serves to give subsequently the temperature of the blood pumped by the left ventricle into the aorta, and hence that of the blood circulating in the coronary arteries of the heart. The animal, with its heart and lungs completely isolated in this manner, is now transferred to a warm moist chamber, kept at a temperature of about 38 deg. Cent. (100.4 Fahr.) The cannula in the superior cava is connected with a Marriott's flask filled with warm defibrinated blood (dog's, diluted with solution of sodium chloride, or calf's), about four litres, and with this the heart is fed. Alongside this Marriott's flask is another quite like it, but empty. The wide aortic cannula is attached to a long rubber tube, which extends through the roof of the moist chamber and whose distal end can be raised or lowered at will. These connections having been made, all clamps are removed; and the heart, taking blood from the full Marriott's flask under a known pressure, pumps it out by the tube connected with the aorta. This tube pours it into a funnel, from which it is conducted to the empty Marriott's flask. As one supply-flask empties, the other fills; and, at the proper time, by turning a couple of stop-cocks, the first flask is disconnected from the heart, and the other used to feed it; while the blood pumped out from the tube in the aorta is now diverted into the flask at first full but now empty. So on, from time to time during an experiment, as often as necessary, each of the two Marriott's flasks is made in turn feeding vessel and receiving vessel for the blood pumped round by the heart. Uniform artificial respiration is maintained by a small water engine. The carotid cannulæ are connected with manometers, which record the pulse-rate and arterial pressure on the paper of a kymograph. Under these conditions we can vary at will venous pressure or temperature, while keeping all other conditions affecting the heart constant. Raising the exit-point of the tube in the aorta raises arterial pressure; raising the level of the supplying Marriott's flask raises venous pressure: and keeping these two constant, we can warm or cool at will the blood circulating in the cardiac capillaries, and accurately learn its temperature by the thermometer whose bulb lies in the aortic arch.

Professor Martin then proceeds to give an account of his experiments in three cases; (1) in which aortic pressure was alone varied, venous pressure and temperature being kept constant; (2) in which venous pressure was alone varied, aortic pressure and temperature being kept constant; (3) in which temperature was alone varied, venous and aortic blood pressure being kept constant.

The isolated dog's heart being supplied with blood of constant composition and known temperature, and under a constant venous pressure from a Marriott's flask, artificial pressure was raised and lowered rapidly between the limits of 40 and 210 millimètres of mercury, by elevating and lowering the level of the opening through which the tube connected with the aorta pumped out the blood poured into it by the left ventricle. No observation was made until the animal had been at least half an hour in the warm chamber, by which time it was certain that the brain and spinal cord, deprived of blood for that period, were absolutely dead; and the rigor of the muscles of the trunk and limbs, almost always very marked by that time, proved conclusively that all the body of the animal except the heart and lungs,

through which alone blood was flowing, was a dead, inert mass; by the ligation of the systemic arteries and veins above described, it was, at any rate, thrown entirely out of any possible connection with the heart.

The experiments, which are illustrated by charts giving curves which show the arterial pressure and pulse-rate during their execution, proved decisively that variations of arterial pressure within those limits had no direct effect whatever upon the rate of beat of the heart. The average carotid pressure in dogs of the size used is 110 to 120 millimètres of mercury, so that the limits above mentioned include, on the one hand, a pressure very nearly double the normal, and, on the other, one less than half the normal. Certain still higher pressures, produced not merely by raising the exit of the outflow-tube, but by narrowing it also, do affect the heart's beat; but the author had not yet had opportunity to fully investigate this part of the question, which has special interest, as the conditions thus produced probably represent very closely those in the heart during a paroxysm of angina pectoris.

Professor Martin next describes his experiments made on the isolated heart, exposed to variations of venous pressure, arterial resistance and temperature being kept constant. The pressure under which blood was sent into the right auricle varied from that exerted by a column of defibrinated blood 7 centimètres in height to that due to a column of blood 38 centimètres in height. These variations were, of course, produced by raising or lowering the Marriott's flask connected with the right auricle. The results, which were expressed in a chart constructed from the tables of pulse-rate and venous pressure, showed conclusively that changes in the latter had no direct influence on the rate of the heart-beat.

Professor Martin next proceeds to describe a third series of experiments, in which venous pressure and arterial pressure were kept constant, and the temperature of the blood sent through the isolated heart alone was varied. The temperature was measured by the thermometer in the aortic arch, and so was that of the blood flowing through the coronary arteries.

It had been already known that temperature changes very greatly influence the rate of beat of the isolated hearts of cold-blooded animals. From the slower beat of the heart of warm-blooded animals while hibernating, and the quicker pulse of artificially warmed animals, as also the quick pulse of fever, it has been assumed that this also was true of the mammalian heart. But so long as the heart is in physiological connection, through nerves and blood-current, with other parts of the body, such a belief is merely probably correct—its validity is not proven.

In the case of fever, for example, we now have much reason to believe that the dry skin and high temperature are both the results of nervous disturbances by which the temperature-regulating mechanism is thrown out of working order. It might well be, therefore, that the quick pulse also was due to nerve-changes extraneous to the heart—such as paralysis of the cardio-inhibitory centre, or excitation of the cardio-accelerator centre, or both. This is, moreover, a case where experiments on cold-blooded animals are least reliable, as bases of argument for mammalian physiology. Deductions made from the heart of the frog, an animal with no heart-regulating mechanism, and never showing true fever, can only

be applied with great reservation to the heart of the mammal. It is nevertheless of supreme importance to know just what does cause the quick pulse of the febrile state; one of whose dangers is, that the over-worked heart will give out before the fever has terminated. If the rapid pulse-rate be determined by extrinsic nerve-influences, or by poisons produced through abnormal nutritional conditions in various organs, and conveyed to the heart in the blood, we cannot *a priori* say that cooling the patient will retard its rhythm and ease the heart. But if it be proved that, in an isolated mammalian heart kept under conditions where all but the temperature of the blood flowing through it is unvaried, hotter blood causes quicker pulse; and *vice versa*, we have a valuable indication that cooling of the patient, as by carefully applied baths, may save life in cases of fever where death is threatened by failure of the heart.

When the paper was read, Professor Martin exhibited a chart illustrating by curves the pulse-rate and temperature during one experiment. Beginning with blood at 37 deg. Cent. (98.6 Fahr.), this was gradually cooled to 30 deg. Cent. (86 deg. Fahr.) and then slowly warmed again. It was seen that every fall in temperature was accurately accompanied by a retardation of the pulse, and every rise of temperature by a hastening of it.

TERRIER AND VERCHIRE ON TUBERCULAR SYNOVITIS.

MM. F. TERRIER and F. Verchire report, in the *Rev. de Chir.*, No. 7, 1882, two carefully observed cases, by which they are enabled to assert, with Lancereaux, Bouilly, and Trélat, the existence of tubercular synovitis of the sheaths of tendons. The first case is one of synovitis of the sheaths of the flexor tendons of the left hand, coexisting with pulmonary tuberculosis; and the second one of synovitis of the sheaths of the extensors in the left hand, the tuberculous nature of which was indicated on direct examination after the death of the patient from rapid pulmonary tuberculosis. This form of synovitis, it is stated, may result from neighbouring tuberculosis in a bone or joint, or may be primarily developed in the sheath itself. When tubercularisation of the sheaths is a primary affection, the lesions differ according as the synovial membrane is ulcerated or not, and as the integument is intact or presents a loss of substance. When the synovial membrane and the skin are not ulcerated, the former is represented by a fungous and sometimes caseous tissue, which may attain considerable thickness, and encloses the otherwise perfectly intact tendons. This thick mass, on microscopic examination, will be found to consist of small cells undergoing fatty degeneration. In specimens in which the synovial membrane and skin are ulcerated, there is close adhesion between the skin and the diseased sheaths. The tendons may be either adherent to the thickened sheaths, or may still move in narrow channels formed in the mass of tubercular new growth. This new growth is arranged in isolated tumours varying in size. The superficial portion of each of the larger tumours is hard, and in the centre of each is a cavity occupied by thin pus and granulations. These synovial tumours present under the microscope the distinctive characters of tubercle. There is an infiltration of embryonic cells invading the serous membrane, cells which at certain points form kinds of small nodules, in which may be recognised an

arrangement in zones, and in the centre of which may be found one or several giant-cells. The embryonic cells are more numerous along the vessels of the serous membrane; they attack the walls of the vessels, and finally obliterate their interior. This point becomes the centre of a nodule, and giant-cells are to be found here. In each of the cases reported by the authors of this paper, the point at which the tubercular ulceration commenced had been the seat of an injury; in one a wound; in the other, a contusion. This fact tends to confirm the dictum of Bazin with regard to articular tuberculosis, that 'traumatic white-swelling is but a scrofulous disorder excited by a physical or mechanical cause'. The excessive action of the muscles of the forearm, and the irritation that may thus be set up in the sheaths of the tendons, may, it is suggested, render these liable to be attacked by tuberculosis.

The commencement of the affection described by the author is usually insidious. On the anterior surface of the wrist or of one of the fingers a small tumour forms, which at first is hard and resistant, but, as it grows, gradually becomes soft. Finally, it presents distinct fluctuation, and forms a cold abscess. The movements of the affected finger are then interfered with, and after a time the member becomes fixed, and any attempts to flex or extend it cause pain. This fixed position persists as long as the disease. When the finger is flexed, the sheath of the flexor tendon is affected; and when it is extended, that of an extensor tendon. A primary tumour, seated, for instance, on the front of the wrist, will be followed by another on the front of one of the fingers, and a third probably in the palm of the hand, without any swelling or affection of the intervening serous membrane. Swelling of the whole of the sheath has not been observed, as in cases of classical fungous synovitis. These tubercular lesions may affect simultaneously the synovial sheaths of both upper limbs. The suprajacent skin adheres to each tumour, and, as this softens, becomes thin and congested, acquires a violet tint, and is covered by small scales. An opening is finally formed, through which is discharged a sero-purulent fluid, varying in quantity in different cases, according to the size of the tumour. A fistula is formed, which after a time is converted into an extended sore, in consequence of progressive ulceration of the skin. The margins of this ulcer are irregular, jagged, and undermined, and formed of thin skin invaded by tuberculosis. Its base presents livid fungous granulations, covered by sero-purulent discharge. On probing this surface, an orifice may be found there, through which the end of the instrument may be passed into the synovial sheath.

The diagnosis of tuberculosis of synovial sheaths may, the authors think, be readily made in the majority of cases by considering the local phenomena, and by reliance on antecedents, and on the presence of general affections. The patient's chest should be carefully examined, and inquiry should be made as to syphilis; since, through the researches of Verneuil, syphilitic lesions of synovial sheaths and sacs are now recognised. When a condition is presented analogous to that just described, when one or more tumours are presented in the region of the synovial sheaths, and when these tumours are circumscribed and show a tendency to ulceration without much suppuration, the surgeon might think that he has to deal with the condition known as fungous synovitis, or with gummata of the synovial sheaths. In fungous synovitis, a form of tuberculosis of sy-

novial membrane described by Lancereaux and Trélat, the tumour is elongated, and involves the whole of the affected sheath. Ulceration of the skin occurs slowly, and the opening gives exit, not to purulent or sero-purulent discharge, but to fungous granulations. In this affection, however, as in that described in this paper by MM. Terrier and Verchire, there is a tubercular origin, and often a co-existence of pulmonary lesions. There is likely to be more difficulty in distinguishing tuberculosis of synovial sheaths from tertiary syphilitic lesions, as there is more similarity in the local phenomena. In the former affection, however, we never meet with the white or grey soft mass presented by an ulcerated gumma. Moreover, the existence of tuberculosis, the absence of any symptom of recent or old syphilis, and the inefficacy of specific treatment, would enable one to establish a rational diagnosis.

The prognosis of this affection is usually unfavourable. Abscess follows abscess, and ulcer follows ulcer. There is no tendency to cure, and the lesions persist without any favourable change, in spite of rational treatment. This resistance to treatment, the authors point out, is one proof of the special nature of this synovial affection, and of the existence of a persistent general affection, to which it is wholly due.

KREDEL ON NEUROSES OF THE VAGUS.

DR. L. KREDEL (*Deutsch. Archiv für Klin. Med.*, No. 30, 1882) discusses this subject at some length with reference to observations made by him in the medical clinique of Professor Riegel in Giessen. He points out that, although the effects of injury or pressure upon the vagus nerve have been much studied by means of experiments upon animals, there is a manifest want of confirmation of the results so obtained, from a purely clinical standpoint. The most obvious results of injury to the vagus, in clinical experience, are acceleration of the heart's action and paralysis of a vocal cord. The symptoms referable to abdominal organs are too uncertain for recognition. The effects upon the respiration would appear to be almost contradictory to those obtained by experiment upon animals. The slow and deep inspirations thus produced have been but seldom observed (a few such cases are, however, recorded by Guttman); the results of injury to the nerve being generally, in the case of the lungs, entirely negative.

That the nerve plays an important part in the phenomena of asthma has long been recognised, and Biermer has of late called especial attention to the production of acute emphysema by the resistance offered to the expiratory efforts by the bronchial spasm. For certain forms of angina pectoris, the agency of the vagus nerve must be held responsible, especially in those cases where no definite organic changes are present; although other agencies also must be recognised, more especially that of the vaso-motor system and the automatic action of the complicated system of centres within the heart itself. The majority of opinion amongst writers upon this subject regards the disturbance of respiration in angina pectoris as due entirely to the pain and anxiety produced, although a few have described true asthmatic paroxysms. It is probable that a certain amount of dyspnoea is nearly always present; but the fact that in some cases the respiration is not interfered with, is in itself a proof that the disturbance of the heart's action is not a sufficient explanation of the dyspnoea when it does exist. A certain

group of cases, in which dyspnoea has accompanied the ordinary manifestations of angina pectoris, has furnished at least one explanation, viz., the rapid production of acute emphysema, which may as rapidly subside with the conclusion of the paroxysm. A case is related in which sudden palpitation was followed by intensely rapid heart's action (198-208), and a remarkable extension downwards of pulmonary resonance without very marked dyspnoea, although the respirations became more frequent. In twenty-four hours, the pulse became normal again, and in thirty-six hours the lung resonance had returned to its former limits. Some relation evidently existed between the accelerated cardiac action and the acute distension of the lung. In a second case, although the disturbance of the heart's beat and of the normal limits of pulmonary resonance were even more marked, there was again no excessive dyspnoea. Considerable cyanosis, however, was observed, and distinct evidence of congestion within the lungs appeared. All these symptoms became developed with great rapidity, and as quickly subsided in the course of a few hours.

In this case, a double cause for dyspnoea may be assumed. The mechanical narrowing of the tubes by congestion is added to the spasmodic contraction of their muscular fibres, assumed in the previous instance. In a third case, of less intensity, the disturbance of respiration ceased earlier than that of circulation. Such cases, presenting the features both of angina pectoris and of asthma, might well be described as examples of 'cardiac asthma'. These cases belong essentially to the group of neuroses of the vagus; the characteristic cardiac phenomena must be regarded as due to an intermittent disturbance of the functions of the cardiac inhibitory fibres. The acute emphysematous condition is, however, produced by spasmodic contraction of the smaller bronchi, and this in its turn by irritation of the pulmonary fibres of the nerve. If the cardiac and pulmonary symptoms own the same peripheral cause, it is necessary to assume the existence of simultaneous irritation of the pulmonary fibres and paralysis of the cardiac fibres as they pass along the trunk of the nerve.

In relation to the first of these cases, Tuzek accepts this explanation, and calls attention to the greater susceptibility of the cardiac fibres to irritation, and also to the unequal distribution of the same fibres in the two nerves. He assumes the compression of the nerve within the chest by enlarged bronchial glands, as the most probable cause of the condition. Although the phenomena observed may be fully accounted for in this way, still the explanation appears somewhat forced, and another interpretation of the sequence of events suggests itself from the well-known experiments of Hering, in which, by forcible distension of the dog's lung, he produced diminished blood-pressure and accelerated heart's action, which continued only so long as the pressure within the lung was maintained. By energetic distension of the pulmonary tissue, he increased the number of cardiac pulsations threefold. Going further, however, he found that extreme pressure again depressed the number of pulsations. Continuing his experiments, he found that this accelerated heart's action was not due to the influence of the expanded lung upon the heart itself, nor did it depend upon the altered conditions of circulation within the lung, but that it was clearly induced by reflex influences conveyed by the vagi nerves. The irritation of the sensitive nerve-fibres within the lung

being referred to the inhibitory cardiac centre, the action of the inhibitory fibres became to a certain extent suspended.

His explanation of the phenomena observed in these cases would, therefore run thus. From whatever cause, as, for instance, rapidly enlarged bronchial glands, the pulmonary branches of the vagus become irritated, spasm of the smaller bronchi takes place, increased pressure and consequent distension follow. The irritation of the sensitive fibres thus set up is reflected to the centre, and in this manner the accelerated pulsation is induced.

Dr. Kredel concludes with the observation that, whatever detailed explanation may be accepted, there can be no doubt that the whole series of phenomena in such cases must be regarded as due to a neurosis of the vagus. They can neither be classed with bronchial asthma nor with angina pectoris, and must, therefore, be separately distinguished as cases of cardiac asthma.

E. CLIFFORD BEALE, M.B.

VANCE ON DISLOCATION OF THE HIP-JOINT.

DR. REUBEN A. VANCE (*Cincinnati Lancet and Clinic*, March 26, 1882) read a paper under the above heading before the Cincinnati Academy of Medicine. He says:

The questions involved in dislocations of the hip are neither few nor unimportant. I doubt if there be any topic in surgery of equal gravity in which there is such a diversity of opinion or contradiction in teaching. It is needless to inquire the cause. The complexity of the parts in which the lesion occurs, the different relations assumed by the bones of the pelvis and thigh in sitting, standing, and walking, together with the widely unlike circumstances under which dislocations of the hip occur, the readiness with which the ordinary land-marks can be obliterated by improper movements of the injured extremity, and the unfrequency with which *post mortem* examinations are made in individuals who have suffered this injury, all go to show why this state of facts should exist. This particular lesion has unfortunately been a favourite field for a class of theorists who adduce opinions without facts upon which to base them, and advance inferences which more frequently come from their imaginations than from their observations. In order to understand dislocations of the hip, the anatomy of the part must be studied by actual dissection, recorded cases must be analysed, the lesion itself investigated, and morbid specimens examined. In a word, it is from clinical and pathological investigations that the rules for the interpretation of recorded cases are to be derived; and, by converging the rays of fact emerging from each of these sources, surgeons will ultimately be enabled to illuminate this topic with the light of truth.

From anatomical, clinical, and pathological facts, I have deduced certain conclusions which are now offered for consideration.

The acetabulum is not equally strong at all points, but its osseous wall and cartilaginous and fibrous rim are so adapted to each other, that, at those points where the greater impacts are received and the most powerful pressures exercised, you find the excavation deepest and the osseous and cartilaginous embankment highest. The cotyloid notch is the weakest part of the acetabulum. This is directly downwards and slightly backward, when the pelvis is in the

position assumed when the body is erect, and is closed by the transverse ligament. As we pass from the osseous and cartilaginous to the ligamentous structure of the hip, we find precisely the same law in operation. Where the greatest tension is habitually exercised, there the ligamentous structures are best developed. The capsular ligament illustrates this principle admirably. In this structure, the fibres pass from the brim of the acetabulum to the neck of the femur, a few strands coming from the anterior inferior spinous process of the ilium, and a few from the anterior aspect of the ilio-pectineal eminence. An unbroken continuity of fibres can be traced from the pubic border of the cotyloid notch upwards, backwards, and downwards, to the ischiatic border of the cotyloid notch. These fibres are thickest on the anterior aspect of the neck of the femur; those above and behind come next; while the weakest part of the capsule is that portion connecting the inferior aspect of the femoral neck with the transverse ligament. Before any conclusions are drawn from these facts, another circumstance should be taken into consideration: are there any structures in the neighbourhood that tend to prevent the direction of force against the weak point? Although the part of the capsule continuous with the transverse ligament closing the cotyloid notch is the weakest portion of that structure, yet the situation and action of the powerful adductor muscles so protect it, that luxation at this point is one of the rarer forms of dislocation of the hip. Weak as is this portion of the capsule, a luxation here can only occur during abduction; and the powerful adductor muscles, preventing that movement, keep the head of the femur from impinging on the under portion of the capsule. When adduction does occur, the head may penetrate its coverings just without the transverse ligament. The anatomy of the joint and surrounding parts demonstrates this fact: if the head of the femur be brought into contact with the capsule at any point, and sufficient force applied, a dislocation may result.

An examination of specimens, and a careful study of clinical phenomena, convince me that not only may you have a dislocation at any point, as anatomy teaches, but that in point of fact you do have the head of the femur forcing its way through the capsule at the point it chances to occupy when sufficient force is applied. The force that sends the head of the femur through the capsule, however, in the vast majority of cases, simply carries the articular extremity out of the socket, and does not tear away that part of the capsule opposite the opening. If the circle of the brim be divided into 360 degrees, it can truly be said that dislocations occur at every degree. The symptomatic phenomena characteristic of dislocations—the flexion, inversion or eversion, shortening or lengthening, abduction or adduction, etc.—are mainly due to the portion of the capsular ligament that has not been ruptured by the force that dislocated the limb. The capsular ligament gives way at the point where the head of the femur impinges upon it at the critical moment; in the majority of cases there is a simple slit in the capsule, or at most a straight button-hole slit conjoined with a few fibres at the acetabulum, which give the capsular opening a T shape. As this opening will but rarely occur in exactly the same place in any two given cases, the symptoms developed by the traction exercised on the limb by the untorn portion of the capsule will seldom be alike in any two cases.

In order to comprehend the measures necessary for reducing a dislocation, it must be borne in mind

that certain movements of the lower extremity are associated. Thus, when abduction occurs, this movement is naturally accompanied by eversion; adduction by inversion, etc. A man falling from a height to the earth flexes his legs upon his thighs, his thighs upon his body, and adducts his knees; that posture is instinctively assumed, in which the greatest amount of force can be received by the feet with the least damage to the organism. Should the force be greater than can be disposed of without harm, a dislocation may be produced. If the thigh be extended and strongly adducted, the head of the femur passes directly upward through the top of the capsule. It may now assume one of these positions; it may remain with the head hanging over the acetabulum, the head may advance, and the great trochanter recede; or the head may recede and the great trochanter advance. The dislocating force perforates the capsule, and carries the head upon the brim of the acetabulum; the neck is surrounded by the borders of the rent in the capsule, and held firmly by the untorn portion of that structure; the subsequent movements are accidental, and may or may not occur. If the thigh be flexed and adducted at the moment that force is applied, the position of the head of the bone will vary with the amount of flexion and inward rotation. As before, so here, the neck will be held by the untorn portion of the capsular ligament, and the deformity that results will mainly be due to the tension it exercises. Should the force be applied while the limb is adducted, dislocation downwards will occur. Should the thigh be over-extended, adducted, and rotated outwards, force directly or indirectly applied will carry the head of the femur forward upon the pubes. Should it be forcibly flexed upon the body, adducted, and rotated inward, it will emerge directly opposite the tuberosity of the ischium, and may rest upon the prominence. Through injudicious manipulation of the dislocated extremity, the head of the femur, when dislocated directly downwards, may be carried towards the pubes or the ischium; and in certain cases, when force is used, it may even recede behind the ischium and pass without the internal obturator tendon. Between these typical and well-defined dislocations, there are many intermediate forms insensibly shading off into each other.

The principles which should govern the surgeon in his efforts at reduction can be thus formulated.

1. Place the limb in the position it occupied the moment it forced its way through the capsule, thus carrying the head of the femur opposite the opening through which it emerged.
2. Manipulate the limb in such a manner as to relax the untorn portion of the capsular ligament.
3. Draw or push, elevate or depress, the head of the femur in such a manner as to carry it over the brim of the acetabulum, exercising this force by proper movements of the extremity, directed by the grasp the surgeon has on the leg, at the same time so moving the limb as to keep constantly relaxed the untorn portion of the capsular ligament.

SAUNDBY AND BARLING ON FAT-EMBOLISM.

DRS. SAUNDBY AND BARLING have contributed to the *Jour. of Anat. and Physiol.*, vol. xvi, a valuable paper on this subject. Commencing with an historical summary of the various researches that have hitherto been made into the pathology of the pro-

duction of fat-embolism since its discovery by Zenker in 1862, they relate particulars of a case which occurred at Birmingham in June 1881 of a man, aged 37, who had sustained a compound comminuted fracture of one leg, a long interval having elapsed before surgical treatment had been applied. On the second day, the pulse, temperature, and respiration having all become increased, the patient, without any other premonitory signs, became semi-comatose, with flushed face and stertorous breathing, and subsequently marked cyanosis. In this state he died on the third day after the injury. On microscopic examination of the lungs, numerous fat-emboli were found in the small arterioles, and a few only in the capillaries. In the kidneys also emboli were discovered, chiefly in the vessels of the glomeruli. None were seen in the lumen of the tubules, but some of the epithelial cells were loaded with minute granules.

A series of observations were then made into the conditions of the lungs in cases of death from various forms of disease and injury. In eight cases of very severe injury, none of which survived more than two days, emboli were found in the lungs. No symptoms had in any case pointed to their presence before death, nor were they very numerous when discovered *post mortem*, especially when considered in comparison with those discovered in the case related. In only one of the cases of disease examined were any emboli found, viz., in a case of diabetes with milky blood, the particulars of which were published by Dr. Rickards in the *Birmingham Med. Rev.*, June 1882. The microscopic appearances in this case, however, differed from those in the cases of death following fracture. The fat-globules were found to be present in the clots filling the vessels, but were not found distending or completely blocking the vessels, as in the other cases. It is probable that these globules were of *post mortem* formation, due to the running together of fine oil-granules.

The occurrence of true fat-embolism in cases of diabetes with milky blood is not yet clearly established, and the negative evidence at present prevails over the positive. Similarly, in a case of farcy recorded by Dr. H. Bendall, the presence of fat-emboli was clearly demonstrated, whilst a corresponding case investigated by Mr. Stanley Boyd gave completely negative results.

From the evidence of the paper by Drs. Saundby and Barling, the occurrence of fat-embolism in cases of severe injuries to the medullary tissue of bones must be considered to be clearly proved. The positive results obtained by all observers upon this point are conclusive; and, in the course of the observations recorded, the strong probability of its occurrence in certain injuries of soft tissues and after major operations cannot be disregarded. Further investigations in this direction are needed.

E. CLIFFORD BEALE, M.B.

SHOEMAKER ON THE OLEATES AND OLEO-PALMITATES IN SKIN-DISEASES.*

OLEATES, says Dr. Shoemaker, must no longer be considered merely as solutions of oxides in oleic acid, as previously described, but rather as definite chemical compounds or salts, having no excess of

either their acid or basic radicals. While the oleic solutions could not have presented, therapeutically, results differing from those of the oxides employed in solution, the oleates themselves present a very different action, by being chemically in a readily diffusible state. To speak of a five or ten per cent. oleate is as absurd as it would be to speak of a five or ten per cent. sulphate of quinine or morphia or atropia, or in fact, any substance having a definite composition. The true oleates, whilst being more efficacious, are of a stable character very different from the oleic solutions in common use; moreover, from containing less oleic acid, they are much less costly, a point not without its practical bearings.

Dr. Lawrence Wolff finds that the best and readiest method of preparing oleates is by the double decomposition of sodium oleates with solutions of neutral salts. The sodium preparation is made, to begin with, by the saponification of oleic acid with sodium hydrate. A solution of this in eight parts of water is then precipitated by the salt required; the precipitate washed and dried yields the oleate. For the sake of economy, the oleo-palmitates, double salts of oleic and palmitic acids with the metal or base required, may come into use; and, when manufactured from a soap of the oil of sweet almonds, which contains less palmitic acids than other oils, they answer well for dermic medication.

First and foremost among the oleates is the *oleate of mercury*. It should be made by precipitating a solution of sodium oleate with mercuric chloride, or a mercuric oleo-palmitate may be obtained by substituting the sodium oleo-palmitate. The precipitate readily forms on boiling the solutions. It may be diluted with either the paraffinates or, better still, with lard or lard-oil. It is the best local stimulant and alterative application of all the mercurials. When applied to the unbroken skin, it produces marked stimulation bordering on congestion. When rubbed in over tumours, indurations, and glandular enlargements, or thickening of the skin, it exerts a most valuable resolvent and alterative action. It has many advantages over the old mercurial ointments: firstly, being a chemical compound, it is more readily absorbed by the skin; secondly, being soluble in fats, it has great penetrating power; thirdly, it does not become rancid; fourthly, it is cleanly and economical. It is a most valuable remedy in syphilis. It is rapidly absorbed, leaving only a reddened surface, and there is no staining of the linen. It is quite capable of producing the constitutional effects, so must be used with caution. It is best to employ an ointment consisting of one part of oleate with three parts of lard, and of this a piece of the size of a small marble may be rubbed into the thighs, the limbs, or trunk. It is also useful in the treatment of indurations occurring after abscesses, in excess or deficiency of pigment, either as a disease or as the result of applications, in indolent papules, in obstinate ulcers, particularly the syphilitic, and in cases of enlarged testicle. In the indolent and chronic stages of psoriasis, when the patches are thickened, harsh, dry, and cracked, the application of the oleate does much good, although it is usually necessary to previously remove the scales by alkaline baths, oils, water-dressing, or wet packing. In all forms of vegetable parasitic disease the oleate lightly smeared over the surface will not only kill the parasite on the surface, but will frequently, by its penetrating and diffusive action, pass into the hair-follicles and sebaceous glands, and destroy any fungus that may have penetrated beneath the skin.

* *The Oleates and Oleo-Palmitates in Skin Diseases.* By John D. Shoemaker, M.D., Physician in Charge to the American Hospital for Skin Diseases. The *Medical Bulletin* (Philadelphia), vol. iv, No. 7. July, 1882.

In phtheiriasis, the oleate destroys both the parasite and the nits. The oleate of mercury may be employed advantageously in combination with other oleates. A mixture of ten or twenty grains of oleate of mercury with one drachm of the ointment of oleate of zinc is very effective in chronic acne and eczema, especially in the fissured variety of the latter, which is so common on the palmar and plantar surfaces. In all syphilitic skin-eruptions, and in superficial ulcers, one drachm of the oleate of mercury with three drachms of the oleate of bismuth, or the same quantity of the ointment of the oleate of lead, acts quickly and decidedly. The oleate of mercury, in the proportion of one or two drachms to one ounce of oil of ergot, forms one of the best and most efficacious oily applications for loss of hair. It is especially useful when the scalp is harsh and dry, and the hairs look dull and lack their peculiar lustre.

The *oleate of zinc* is made by decomposing a sodium oleate with a saturated solution of zinc sulphate, boiling out and drying the precipitate, and then reducing it to an impalpable power. One part of this, melted with three parts of a fatty vehicle, forms a most useful ointment. The best results, however, have been obtained with oleate of zinc alone, unmixed with any fatty substance. It is a fine pearl-coloured powder, having a soft soapy feel, very much like powdered French chalk. It is a valuable application in all forms of sweating.

The *oleate of lead* is obtained by precipitating a sodium oleate with a solution of lead subacetate. The washed and dried precipitate, melted with equal parts of lard, gives an ointment which may be designated the ointment of lead oleate. This ointment is cream-coloured and semi-solid, of the consistence of simple cerate. When applied to the denuded skin, it exerts both a combined sedative and astringent action, and will arrest morbid discharges, protect the surface, and allay irritation. It is more readily absorbed than either Goulard's cerate, or Hebra's litharge ointment, and it is now easily and cheaply prepared. It is of the greatest use in allaying the inflammation and checking the discharge and itching of eczema. It is useful in simple lichen, and in the hard indurated papules in acne of the face and back. It may often be used with much advantage in combination with one or other of the oleates to be presently described. Thus a good combination in many skin-diseases is two drachms of the oleate of lead, with one drachm of oleate of bismuth. This has a most beneficial effect in the fissured form of palmar and plantar eczema. When the inflammation and cracking are very deep and severe, and require a marked stimulation, the addition of twenty or thirty drops of the oil of cade, to two drachms of this oleate, will succeed better. In scabies, an excellent preparation is four drachms of the oleate of lead ointment, with half a drachm of sulphur.

The *oleate of copper* is obtained in a similar way to the lead oleate, by double decomposition with a saturated solution of copper sulphate. A 10 or 20 per cent. ointment may be made with either cosmoline, fat, or lard. When applied to the unbroken skin, the oleate rapidly penetrates deeply into the parts, particularly into the follicles, producing slight stimulation. If brought into contact with the broken skin, it coats it with an insoluble albuminate. It is an excellent application for ringworm, and, even in the most obstinate cases, will usually speedily effect a cure. It is a good application for indolent ulcerated surfaces, and in some cases has cured obstinate, hard, and horny warts and corns.

The *oleate of aluminium* is prepared by decomposing sodium oleate with aluminium sulphate. The washed precipitate, mixed with equal parts of lard, forms the ointment. The ointment thus prepared is semi-solid, dark-brown in colour, and has a most powerful astringent action. It quickly checks all muco-purulent discharges, and is an useful dressing for foul ulcers, sinuses, burns, and scalds.

The *oleate of bismuth* can be obtained only by first preparing a crystallised bismuth nitrate, dissolving this in glycerine, and decomposing with this the sodium oleate. It is of ointment consistence, and should be used as thus obtained. It has a pearly-grey colour, and is a soft bland substance. It has an emollient and slightly astringent action, and is a most valuable remedy in soothing and relieving cutaneous irritation. In pustular eruptions, particularly sycosis, the oleate of bismuth, lightly pencilled over the surface with a camel's hair-brush, will greatly relieve the engorgement of the parts, and will often abort the pustules. It is equally efficacious in superficial erysipelas, and in sunburn, and is of much value in chronic inflammation of a portion of the face. It is most useful in gonorrhœa and gleet; the best way being to pass a bougie, covered with the oleate of bismuth, and allow it to remain in the passage for some minutes.

The *oleate of iron* is made by precipitating from sodium oleate with ferrous sulphate; on boiling it is converted into ferric oleate, and, as such, may be used either alone or mixed with an equal quantity of fatty base to form an ointment. It is free from local irritation when used topically, but, when brought into contact with an ulcerated surface, it has a mild astringent action. It is readily absorbed, so as to produce the constitutional effects of the iron. A small piece of ointment may be rubbed into the axillæ and groins two or three times a day. This mode of treatment is of the greatest value when the stomach is irritable, and ordinary preparations of iron are not well borne.

The *oleate of arsenic* is derived from the arsenious chloride, made by the cautious saturation of hydrochloric acid with arsenicum. This solution having been obtained, it is mixed with sodium oleate, when the arsenicum oleate is thrown down. In the proportion of twenty grains to an ounce of fatty base, it forms the ointment of arsenicum oleate. It is in this form a soft yellowish ointment, having no action on the skin. When applied to wounds, or ulcerating surfaces, it destroys the tissues to some depth. In lupus, especially the ulcerating varieties, its constant application will destroy cell-infiltration in a mild and comparatively painless manner. It is also used with advantage in the tubercular form of lupus, and in the ulcerating variety of epithelioma. It may be employed, after scraping the surface, to destroy warts, condylomata, nævi, corns, horns, and old granulations. In some cases, it may be combined with opium, belladonna, hyoscyamus, or arnica.

The *oleate of silver*, like the others, is prepared by precipitating the sodium oleate with a salt of the metal, a saturated solution of nitrate of silver being employed in this case. The precipitate is washed with boiling water, and then dried, after which it is reduced like the zinc oleate to a fine powder. One drachm of this dissolved in an ounce of fatty material forms a most useful ointment. This oleate, in its natural form, sprinkled over old chronic ulcers, bed-sores, and exuberant granulations, will set up a healthy state in the parts. It is a safe and efficacious remedy in erysipelas, and can be used either

round the margins to prevent the inflammation from extending, or it can be applied diluted to the inflamed surface. It checks itching about the anus and in other regions, and is sometimes employed in combination with opium, belladonna, etc.

The oleates of magnesium, lithium, calcium, antimony, tin, etc., are easily prepared, but as yet have proved of little value, as far as dermic medication is concerned.

[Mr. Martindale has recently made the reporter some oleate of zinc, according to the method described in this paper, and it is undoubtedly a very great improvement over the old so-called oleate. As Dr. Shoemaker says, it is 'a fine pearl-coloured powder, with a soft-soap feel, very much like powdered French chalk'. Mixed with thymol (1 in 500), and used as a dusting-powder, it forms an excellent application in many varieties of local sweating. The reporter has used it with much success in the treatment of the night-sweating of phthisis.—*Rep.*]

WILLIAM MURRELL, M.D.

NEWCOME ON CHINESE DRUGS.

IN a series of articles in the *Med. Press and Circular*, analysed in the *New York Med. Record*, Mr. Frederick Newcome gives an account of the Chinese materia medica, and makes a number of striking statements regarding the drug-taking capacity of the descendants of the Sun.

The Chinese are, he says, pre-eminently a medicine-making and medicine-taking people. At Hankow alone, one of China's nineteen open ports, over twenty million pounds of drugs pass annually through the foreign customs, besides a nearly equal amount of other substances used in drug manufacture. At most of the other ports, medicines in the form of dried bulbs, roots, leaves, bark, and stalk, stand fifth or thereabouts on the list of imports and exports. At the port of Ningpo, the trade in drugs of all kinds represents from one-third to one-half of the total commerce of this place. To all this must be added the immense quantity interchanged overland and conveyed in native-owned junks. There is hardly a herb in the Flowery Kingdom to which some medicinal property is not attributed.

The raising of medicinal plants, and manufacture of medicines therefrom, has thus become a separate and extensive industry, so much so as to make China the eighth wonder of the world in this respect. Moreover, this industry is yearly increasing.

Curiously enough, the Chinaman, although addicted to drugs, is, so to speak, a Thompsonian, and uses vegetable remedies almost exclusively. Mineral compounds are only employed externally, as a rule; and even mercury in syphilis is neglected, the opinion being that it will cause impotence or barrenness.

Another peculiarity of the Chinese materia medica is that, although so extensive, it apparently is quite different from ours. The Chinese do not even use, to any extent, such drugs as rhubarb, aloes, castor-oil, or ordinary camphor, although they raise and export them in large quantities. Concerning rhubarb, the Chinaman, while not employing it much himself, is profoundly convinced that it is an essential to European civilisation, a bulwark, indeed, of the Christian social fabric. During the war of 1839-40, the policy was seriously discussed of cutting off the exports of rhubarb, it being believed that the Europeans would then soon die of constipation.

Mr. Newcome enumerates somewhat over a dozen drugs which are particularly popular with the Chinese, and mentions many others widely used, but whose properties are little known to Europeans.

Ginseng, naturally, heads the list. Despite European and American criticism, it still holds its place in the affections of the celestial. Furthermore, the price of some varieties is enormously high, as much as five dollars an ounce being paid for the wild Manchurian variety. Millions of pounds sterling are spent yearly in its growth and purchase. Mr. Newcome thinks that foreigners have not given it a fair trial; that the specimens raised in America, or brought here and to Europe, have been poor. This view takes some plausibility from the fact that there is a great difference in the quality of the plant in China itself. The popularity of the drug is certainly immense, and it may almost be said to form part of the daily diet of every well-to-do inhabitant.

Tangkuei is the name of a drug made from the roots of the *Aralia Edulis*, a shrub quite common in China. The annual consumption of it amounts to several million pounds a year. The annual exports at Hankow in 1880 were valued at 250,000 dollars. It is used in debility and in uterine disorders, but it seems to be nothing more than a cheap tonic.

Paichu is the forked root of a species of distaff thistle. It is estimated that two million pounds of it are raised annually. It has, like most of the drugs described by Mr. Newcome, reputed tonic and stimulant effects.

Yüangshên, of which over a thousand tons are raised every year, is given to women after confinement as a stimulant to the mammary gland. It is also a tonic, but is used, in addition, in fevers, and in diseases of the heart, lung, and kidney. It is a kind of cheap substitute for the great panacea, ginseng.

Maitung is the tuber of a liliaceous plant, *Ophiopogon Japonicus*, and has reputed properties as a tonic and refrigerant. It is given as a remedy for vomiting, blood-spitting, dry cough, and lung diseases generally. In large doses it is narcotic.

Peium is the decoction of an herb, *Liliacea revularia*, which is highly esteemed as a safe cure for fevers, dysentery, internal hæmorrhages, gravel, and bladder-diseases. It is also used as a liniment.

Shengti, the roots of *Repinannia Chinensis*, is used by the physicians of Canton as a blood-purifier and alterative.

Yuanho is also a blood-purifier and alterative, but, in addition, has astringent and sedative properties. It is thought to be of especial value in female disorders.

Yujon is a drug in much repute for worms, fevers, and especially as a stimulant to the sexual organs.

The above are examples of some of the more popular Chinese drugs. It would hardly be worth while to prolong the list thus given. The actual knowledge of their medicinal value, nevertheless, is slight. Almost every one seems to be either a tonic or a panacea.

There is plainly a fruitful field for medical study in China if the field can only be reached. The opportunity is particularly good for those who believe in empirical therapeutics. But the nihilist may also, if he chooses, draw from Mr. Newcome's statements some pleasing reflections; and for the latter's comfort, the fact may be mentioned that the

Chinese, in common with the inhabitants of India, do not take to European medicines very enthusiastically, although they admit the superiority of our surgery. Are our drugs poor, or are theirs better, or are both equally bad?

At any rate, the Chinaman seems to be a drug-taking animal. We opine that he is driven to this habit by the fact, quite well attested, that he is underclothed, underfed, overcrowded, and altogether a sickly creature. And man seeks the apothecary, not because drugs are so potent, but because he feels so miserable.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. DROSDOFF, V. T.—Franklinisation as a Therapeutic means in Nervous Diseases. (*Vratch*, 1882, No. 8, pp. 113-4.)

2. MASALITINOFF, A.—On the Therapeutic Application of Sculptor's Clay in a Case of Angina Pectoris. (*Vratch*, 1882, No. 11, pp. 176-7.)

3. BOGDANOFF, L.—A Case of Salicylic Insanity. (*Vratch*, 1882, No. 12, p. 194; and No. 13, p. 213.)

4. SAKOVICH.—On Preparation of Koumiss from Cow-Milk. (*Vratch*, 1882, No. 12, p. 195.)

5. STELMAHOVICH, N. M.—On Action of Cold Wet-Packings. (*St. Petersb. Inaug. Dissert.*, 1882.)

6. BINZ.—The Action of Iodoform on Leucocytes. (*Virchow's Archiv*, Band lxxxix, Heft 3.)

7. BERGERON.—Bromide of Potassium in Diabetes. (*Jour. de Méd.*, Oct. 7th, 1882.)

8. FRONMÜLLER.—The Hypnotic Value of Tannate of Cannabin. (*Memorabilien*, July 21, and *New York Med. Record*.)

9. DE KORAB.—On Helenin. (*Comptes Rendus*, tome xciv.)

10. BREWER.—Carbonate of Ammonia as a Stimulant. (*Amer. Journ. of Med. Sciences*, July.)

11. MERCK.—New Remedies.

12. CAROBA. (*El Sentido Catal.*)

13. FELIZET.—The Cure of Diabetes Mellitus by Bromide of Potassium. (*Bull. de Thérap.*, 15th Sept.)

14. LEPINE.—The Use of Caffein in Diseases of the Heart.—HUCHARD.—Caffein in Asystolia. (*Jour. de Méd. de Paris*, Sept. 23.)

15. JOFFROY.—The Treatment of Certain Affections of the joints by Electricity. (*Arch. Gén. de Méd.*, Nov.)

16. NICAISE.—The Treatment of Traumatic Tetanus by Chloral. (*L'Union Méd.*)

17. HARDY.—The Treatment of Locomotor Ataxy. (*Gazette des Hôpitaux*.)

18. FRONMÜLLER.—Homatropin in the Night-Sweats of Phthisis. (*Memorabilien*, 1882, Heft 1.)

19. MULBERGER.—The Treatment of Angina Pectoris. (*Memorabilien*, 1882, Heft 3.)

20. WHITELEY.—Belladonna in Icterus. (*Brit. Med. Journ.*, October, p. 737.)

21. NEALE.—The Chemical Lung. (*Lancet*, Sept., p. 444.)

22. DUNBAR.—Bismuth in Dyspepsia of Children. (*Practitioner*, Sept., p. 184.)

23. HARKIN.—The Treatment of Rheumatism and Gout. (*Brit. Med. Journ.*, Sept., p. 554.)

1. *Drosdoff on Franklinisation.*—Dr. V. J. Drosdoff of St. Petersburg (*Vratch*, 1882, No. 8) has tried the effects of static electricity on twenty patients, suffering from various reflex and rheumatic neuralgiæ or muscular rheumatism. The 'franklinic currents' of all degrees were supplied by a Goltz's friction-machine; all the patients were left uninsu-

lated and franklinised during from five to fifteen minutes at a sitting, by the positive pole alone. The conclusions the author arrived at are as follows. 1. The sensation of the franklinic current is different from that of the faradic and galvanic. The weak currents cause a burning sensation, the strong ones a sensation of concussion or stroke, at the point where a spark is produced. 2. The electricity distributes itself all over the body, and, during a sitting, sparks may be produced by contact at any desired point of the surface. The strength of a spark lessens with the increase of distance from the franklinised point. 3. The skin, at the point of franklinisation, at first becomes red and anserine, then pale and nearly white; an artificially produced erythema disappears. 4. The general functions undergo some considerable changes; the heart's action shows retardation (four to twelve beats less in a minute); the pulse becomes fuller; the respiration deeper and slower; the quantity of urine voided after a sitting is often considerably increased. 5. The most striking changes, however, are observed in parts affected with neuralgia or rheumatism. Immediately after a sitting, pain and tenderness disappear, and, during the remaining part of the day, the patients feel much better than before a sitting. Each successive franklinisation brings a further decrease of intensity of neuralgia. In cases of short standing, three or four sittings suffice to completely remove the agonising pains. Ten to fifteen sittings cured even cases of neuralgia of twelve years' standing, which had obstinately resisted galvanisation, faradisation, and all possible therapeutic means. In each of the author's cases, either complete cure or very considerable improvement followed. 6. There is no necessity to undress a franklinised patient, as the therapeutic effects of this excellent agent remain unchanged—a circumstance of practical importance in female cases. The author enthusiastically joins Professor Charcot (see *LONDON MEDICAL RECORD*, May 1881, p. 185), and Dr. Morton (*ibid.*, May 1882, p. 186), in their expectations of a good therapeutic future for static electricity.

2. *Masalitinoff on a Case of Angina Pectoris, successfully Treated by Sculptor's Clay.*—Having perused Dr. Sokoloff's article (see the *LONDON MEDICAL RECORD*, April 1882, p. 144), Dr. Masalitinoff (*Vratch*, 1882, No. 11), resolved to try the same method in a severe case of angina pectoris of four years' standing, in a patient aged 22, suffering from old post-rheumatic insufficiency of the mitral and aortic valves. Of late, the anginal paroxysms appeared two or three times weekly, always at night, returning from two to four times, lasting from fifteen to sixty minutes, and preventing the patient from sleeping. Quinine, amyl-nitrite, arsenic, valerian, etc., entirely failed to relieve the agonising pain. Dr. Masalitinoff ordered the application of cakes of moist sculptor's clay to the cardiac region twice a day. From the very first application, the patient felt greatly relieved, slept soundly through the night, and on the next day no traces of pain remained. At the end of three weeks, the patient remained entirely free from any cardiac pain; he was now scarcely recognisable; he became strong, cheerful, and gained in weight. The author used 'home-made' sculptor's clay in this case. He took finely ground plaster-of-Paris, and moistened it with water, thus making a soft paste, which he spread on a piece of linen and applied to the painful region.

3. *Bogdanoff on a Case of Salicylic Insanity.*—The author records a case (*Vratch*, 1882, Nos. 12

and 13) of transient insanity induced in a woman, aged 44, by the use of salicylate of soda. The patient, an anæmic and weak peasant, was suffering from acute articular rheumatism, and during ten days took 300 grains of this remedy, or 30 grains daily. After taking this amount, all articular pains ceased, the temperature fell to the normal level, and the patient generally felt fairly well. Suddenly, on the eleventh day, there appeared noises in the ears, headache, sleeplessness, irritability, mental depression; and on the twelfth day extreme excitement, with very active delirium (mainly of erotic character), and hallucinations of sight and hearing. These symptoms lasted nearly three days, and eventually disappeared under the use of bromide of potassium and chloral.

4. *Sakovich on Koumiss made from Cow's Milk.*—Dr. Sakovich, in the *Vratch*, 1882, No. 12, highly recommends a method of preparing koumiss from cow's milk, as it was originally given by Dr. Torop-off. He takes half a champagne-bottle of morning unskimmed milk, and fills up the bottle with pure fountain water. This mixture is triturated in a mortar with one gramme of best yeast, and again returned into the bottle, with the addition of two tablespoonfuls of finely powdered sugar. During the first twenty-four hours the bottle is kept uncovered at the temperature of 14 deg. Reaum. (63.5 Fahr.), then it is hermetically corked and kept in a cold cellar for five days. On the sixth day the koumiss is ready for use, and presents then a white, creamy, slightly gaseous fluid of pleasant taste. This preparation is well borne by patients, and the author obtained excellent results from it in many cases of phthisis and pleuritis.

5. *Stelmahovich on Cold Wet-Packings.*—After numerous very carefully performed observations on healthy and diseased subjects, Dr. Stelmahovich (*St. Petersburg. Inaug. Dissertation*, 1882) has come to the following conclusions. A. In healthy persons, cold wet-packings, of thirty to forty-five minutes' duration, the temperature of water being 3 deg. to 8 deg. Reau. (38.75 deg. to 50 deg. Fahr.), produce these changes. 1. During a packing, the rectal temperature in the majority of cases at first rises 0.1 deg. Reau., and then sinks; the temperature in the ear and mouth falls from the beginning; the axillary temperature either very slowly falls, or at first remains unchanged, and after sinks rather rapidly. The reduction lasts after the termination of a packing. The amount of reduction varies for the rectum from 0.2 deg. to 0.5 deg. Reau.; for the axilla and mouth from 0.4 deg. to 0.7 deg.; for the ear from 0.4 deg. to 0.8 deg. (The temperature was taken every fifteen minutes, the last observation each time being made by the end of the first hour after a packing.) 2. The blood-pressure (taken in the radial artery) invariably rises at first; then, by the end of a packing, sinks; and within half an hour after the termination of the latter, returns to the primary level in some patients, falls below it in others. 3. The number of cardiac beats diminishes. 4. Respiration at first becomes deeper and more frequent, and, by the end of a packing, returns to its primary frequency. 5. The muscular power of the hands, tested by means of a dynamometer, in the majority of cases is increased. 6. The sense of touch, examined by means of a Weber's æsthesiometer, is always increased. Electro-cutaneous sensibility, in a large majority of cases (in fifteen out of seventeen), is increased; the increase being greatest in the umbilical region. B. In febrile patients: 1. The tem-

perature, after four successive packings, was reduced in the rectum at the rate of 0.5 deg. to 2.0 deg. Reau.; in the axilla, 0.7 deg. to 2.3 deg.; in the ear, 0.6 deg. to 2.2 deg. The amount of reduction is influenced by the quantity and temperature of the water with which the packing-sheet is moistened, as well as by the day of the disease, and the rapidity of the succession of packings; the degree of reduction is the less, the more rapidly packings follow one another. 2. In five experiments on recurrent fever, the loss of heat by skin, measured by a Winternitz's calorimeter, became greater after packings than it was before. 3. After several successive packings the sense of touch decreased, and the electro-cutaneous sensibility increased. 4. The number of cardiac beats decreased. 5. Respiration became deeper, and less frequent. 6. The muscular power increased.

V. IDELSON, M.D.

6. *Binz on the Action of Iodoform on Leucocytes.*—Dr. Binz (*Virchow's Archiv*, Band lxxxix, Heft 13) has performed some experiments, to show that iodoform checks suppuration by paralysing the white blood-corpuscles, and so preventing their wandering through the walls of the vessels. He maintains that quinine, and carbolic and salicylic acids, have the same effect.

7. *Bergeron on Bromide of Potassium in Diabetes.*—Dr. H. Bergeron (*Jour. de Méd.*, Oct. 7, 1882) in confirmation of Dr. Felizet's recent note, reports the complete disappearance of sugar from the urine of a diabetic patient, after fifteen days' treatment by one drachm of bromide of potassium daily.

R. SAUNDBY, M.D.

8. *Fronmüller on the Hypnotic Value of Tannate of Cannabin.*—Dr. Fronmüller of Fürth (*Memoirab.*, July 21, 1882), through the help of Merck of Darmstadt, has obtained a preparation of hemp, the tannate of cannabin, which he finds reliable, effective, and easy to administer. Tannate of cannabin is a yellowish brown powder, insoluble in water or ether, slightly soluble in alcohol, and easily dissolved in water that has been made slightly alkaline. It has a taste like tannin, and a not unpleasant smell. In the distillation of hemp, two volatile oils are developed, cannabin oil and its hydrate. These are rapidly acting irritant poisons. They are said to be removed in the preparation of the tannate. In describing the practical use of the cannabin, Dr. Fronmüller states that he has used hemp itself much for thirty years, and that there has been a steady increase in the strength of the preparations furnished him. Thirty years ago, he began with a dose of 8 grains; ten years later, he had to reduce it to 4, and latterly to 2 grains. The dose of the tannate ranges between 2 and 10 grains, the most frequent dose being 5 grains. The drug was used fifty-seven times in hospital and six times in private practice. The patients consisted of twenty-one men and forty-two women, varying in age, for the most part, between twenty and forty years. Forty of them were suffering from phthisis; the remainder had different diseases, generally of a chronic nature. The common symptom in all cases was insomnia, and it was for its hypnotic effect that the cannabin was given. Good results were obtained in thirty-seven cases out of the sixty-three, and moderately good results in fifteen cases. It was called a good result when quiet and uninterrupted sleep came on within an hour after taking the medicine, the patient awakening with no toxic after-effects. In twelve cases, no result was produced. Many of the patients had been taking opium. From the sixty-three trials thus

reported, Dr. Fronmüller concludes that tannate of cannabin is a very useful hypnotic, powerful without being dangerous, and one which does not disturb the secretions or leave unpleasant toxic after-effects, if given in proper dose.

9. *De Korab on Helenin in Tuberculosis.*—In a recent communication to the Société de Biologie, M. de Korab described some results following the use of helenin in pulmonary diseases. The same observer reports (*Comptes Rend.*, tome xcv) some experiments made as to the action of that substance upon the bacilli of tuberculosis. He states that, when the organisms were suspended in sterilised serum and placed in tubes, into some of which helenin was also introduced, the bacilli multiplied in the liquor containing no helenin, but that in which it was present showed no signs of their development. Further, whilst the former liquid, when injected into animals, produced the tuberculous condition, the latter appeared to be inert in this respect. Some other experiments appeared to show that helenin, administered in the food or injected subcutaneously, acted as a preventive to tuberculous infection by inoculation, or in cases where the disease already existed, modified it favourably. Helenin is a crystalline substance occurring in small quantity in elecampane root (*Inula Helenium*), and is represented by the formula C_6H_8O .

10. *Brewer on Carbonate of Ammonia as a Stimulant.*—In an experimental essay on this subject, Dr. E. P. Brewer, in the July number of the *Amer. Journ. of the Med. Sciences*, takes the position that the stimulating properties possessed by this drug are owing to evolution of free ammonia, while in process of combining with the hydrochloric acid of the gastric juice. In support of this view, he states that forty-nine experiments have led to the following conclusions. 1. Carbonate of ammonia, administered by the rectum, cellular tissue, and intestine, is almost completely robbed of its stimulating properties. 2. By the stomach, it acts with great power when we permit the full play of the acid gastric juice; the converse being apparent when we neutralise the acid of the gastric juice. 3. The ultimate result of the chemical union is a product totally different in power and latitude of action from carbonate of ammonia. Analyses of blood made soon after the administration of a dose of carbonate of ammonia show an excess of free ammonia.

11. *Merck on New Remedies.*—The following notes are taken from the Trade Report of the Chemical Works of E. Merck of Darmstadt.—*Gynocardic Acid.*—Like the oil of chaulmoogra (oleum gynocardiae), this substance, which is regarded as the active principle of the oil, is used successfully in skin-diseases, rheumatism, etc., both internally, in form of pills, and externally, in form of salve. *Baptisin, pure.*—The resinoid 'baptisin' is used in the United States as a purgative and cholagogue. It is, however, uncertain in its effects, owing to the impurities present and its variable composition. E. Merck now prepares a purified baptisin, which represents the active constituents in the same proportion as they exist in the plant. It is a yellowish-white powder, almost tasteless, and easily soluble in diluted alcohol. *Colocynthin, pure.*—Experiments made by Dr. Hiller, in the Charité at Berlin, have shown that perfectly pure colocynthin is a most excellent purgative, entirely devoid of the toxic and drastic effect produced by extract of colocynth. It is administered internally in doses of 0.1 to 0.4 gm. ($1\frac{1}{2}$ to 6 grains). As it is very soluble in water, it may also be used for hypo-

dermic injections, in 10 per cent. solution, in doses of 0.1 to 0.3 gm. ($1\frac{1}{2}$ to 5 grains). It is a yellowish-white powder, of a purely bitter taste, easily soluble in water and alcohol. *Homatropin and Hyoscin.*—Both of these alkaloids have become staple articles of demand. Their high price heretofore prevented their general use; but improvements in the mode of preparation have caused a considerable reduction. *Sulphate of Lobelin.*—The effects of lobelin are closely allied to those of nicotine and coniine. The 'pure' lobelin appears as a yellowish, semi-liquid mass, soluble in water, alcohol, and ether. The sulphate is in form of a pale yellowish-white crystalline powder, and, owing to its easy solubility, is very suitable for hypodermic administration. *Papayotin.*—Merck's preparation peptonises, according to his own statement, two hundred times its own weight of fresh blood-fibrin (freed from excess of moisture by pressing with blotting-paper, and, therefore, representing pure meat). Other preparations found in the market under this name were found by Merck to possess not even the digestive power of the crude juice. *Sabbatin.*—This glucoside, from Sabbatia Elliotti, is used as a substitute for quinine.

12. *Caroba.*—In Brazil (*El Sentido Cat.*) an infusion of the leaves of the caroba (*Jacaranda procera*, Sprengel), as well as Dr. Colmeiro's electuary, is much used in the treatment of cutaneous and syphilitic affections. The infusion is made of 1 part of the leaves to 9 parts of water. The dose is 1 drachm three times a day. The formula for the electuary is as follows:—Powdered caroba leaves, 45 parts; powdered sarsaparilla root, 15 parts; senna leaves, 15 parts; calomel, 1 part; syrup, q. s. The dose is a drachm twice daily. Caroba contains an alkaloid (carobine) crystallising in silky needles, insoluble in ether, and rapidly soluble in water and boiling alcohol; two acids, one (carobic) crystallisable in stellate forms and soluble in water and alcohol, and another (stero-carobic) of pale brown colour; a resin (carobon), amorphous, balsamic, and acid; a balsam of syrupy consistency and agreeable aromatic odour, and other less important principles.

13. *Felizet on the Cure of Diabetes Mellitus by Bromide of Potassium.*—M. Felizet has sent the following communication to the French Academy of Science (*Bulletin de Thérap.*, 15th Sept.) My first researches on this subject were made in 1877. I have now fifteen cases of diabetes treated successfully by bromide of potassium. The memorable experiment in which Claude Bernard succeeded, in 1849, in producing diabetes, or rather glycosuria, in animals, led me to endeavour to obtain the complete cure of the disease. As a matter of fact, my work is but the counterpart of the fundamental experiments of Claude Bernard. He has shown how the irritation of a determinate zone of the medulla oblongata stimulates the glycogenic function of the liver, and produces glycosuria. My experiments have induced me to arrest this glycosuria artificially produced in animals. The experiments of which the results are summarised in this note, by showing that the drug which stops glycosuria a few hours, likewise cures diabetes in some weeks or months, permit me to affirm that there exists a connection between artificial glycosuria, intermittent diabetes, and confirmed diabetes; and that the connecting link is irritation of the medulla oblongata. It is not, then, by masking the disease, by submitting it to a rigorous regimen, deprived of bread, of starch, of sugar, etc., that it can be cured, but by suppressing the irritation of the medulla oblongata. Bromide of potas-

sium, in consequence of the special sedative action which it exercises over the functions of the medulla oblongata, suppresses the effects of this irritation with a sometimes surprising rapidity; in large and continual doses, it cures diabetes.

14. *Lepine, Huchard, and others, on the use of Caffein in Diseases of the Heart.*—Caffein, experimented on by Gubler, has been employed for four years in cardiac diseases by Lepine. He prefers it to digitalis, for the purpose of showing the contractions, and to revive the energy of the action of the heart. He administers citrate of caffein in doses of 0.75 centigramme, 1 gramme, sometimes 1.50 grammes, and in some cases as much as 2 grammes, and 2.50 grammes daily. The advantages he finds in it are: 1. The relative rapidity of its action; 2. The greater tolerance of it on account of its more rapid elimination. Not a single case of poisoning has been noted amongst his patients. As objections he points out: 1. The insomnia and nervous condition which it produces in certain cases; these cases, however, are very rare; 2. The price of an active dose of caffein is considerably higher than that of a similar dose of digitalis. He terminates his paper by the following conclusions. 'I have no need to add that caffein does not always cure asystolia, any more than does digitalis; whatever power these two substances may have, their effect does not extend to all cases. I can only say that, in my knowledge, there is not a single case amenable to digitalis which is not always so to caffein. In a patient with whom caffein has failed I have never succeeded with digitalis; on the contrary, perhaps in consequence of the rapidity of the action of caffein, but especially owing to the relative facility with which it is tolerated, I have sometimes succeeded with it where digitalis had been completely useless. I have notes of two cases which put this fact beyond doubt. I conclude from this, that the use of caffein in cardiac cases is not a superfetation, and that this drug is not a common substitute for digitalis, but its equal; only, I insist most particularly on this point, the delicacy of its posology. A sufficient dose of it must be administered; and success is not attained by its use when the administrator is not thoroughly accustomed to it, but by a series of tentative efforts. It is not at once that as much as two grammes may be administered without the risk of being extremely imprudent; on the other hand, we must not delay with insufficient doses, as the patient is discouraged and disgusted, and what is worse, time is lost, the cardiac affection is allowed to grow worse, at the same time the ground is prepared for want of tolerance of the medicine; in short, in the handling of caffein, not only clinical tact, but experience, which is only acquired with time, must be brought to bear.'—M. Huchard, at a recent meeting of the Société de Thérapeutique of Paris, read a paper (*Journ. de Méd. de Paris*, Sept. 23rd, 1882) on the use of caffein in asystolia. This drug, he said, has the effect of increasing arterial tension and of diminishing after a short period of acceleration the frequency of the cardiac pulsation. It cannot be used in all cases of asystolia, any more than other medicines which are in good estimation in heart-affections; but it sometimes renders great services, especially when digitalis is powerless, and morphia is contra-indicated in consequence of the oliguria which it brings on. Caffeine promptly induces diuresis which reaches from two to three pints; its elimination is likewise rapid, and prevents any danger from accumulation. M. Dujardin-Beaumetz said that he used in

hypodermic injections the double benzoate of caffein and soda obtained by M. Tanret. Pure caffein would be too little soluble to be administered by this method. The intolerance of cirrhotic patients for caffein seemed to indicate that this alkaloid needs to pass through the liver to have an efficacious action. Perhaps guarana, which contains a larger proportion of caffein than coffee, might be useful in the treatment of cardiac affections. M. Martineau stated that he had given, following Pelletan's example, infusion of raw coffee (40 grammes to a cup) as a diuretic, and had found it to possess some advantages. M. Huchard pointed out that the physiological action of caffein is still imperfectly known; thus, according to some, it increases the excretion of urea; according to others, it diminishes it. These two opinions are both correct, for it diminishes the urea after having first produced a transitory increase.

15. *Joffroy on the Treatment of Certain Affections of the Joints by Electricity.*—Dr. A. Joffroy, writing in the *Archives Générales de Méd.*, Nov. 1881, says that electrotherapy is only efficacious in cases of chronic arthritis, and is contra-indicated when the acute and subacute phenomena have not disappeared. In the joint-affections of progressive chronic articular rheumatism, the results are but small; and when they are successful, they may be rather attributed to rest than to electrotherapy. In chronic articular rheumatism with uncertain localisation and progress, and especially in the chronic forms of arthritis, consecutive on blennorrhagia, the puerperal state, or injury, more satisfactory results are obtained. The operation consists in fixing the positive pole of a continuous current battery, with from twenty to forty elements, either on the sides or on the upper or lower portion of the swollen joint, and moving about the pad representing the negative pile over the cutaneous surface. The skin becomes red and sensitive where the pad is applied. In the successful cases, the lesions were situated especially on the tissues surrounding the joint, which were indurated and resistant. There were neither fungosities, nor osseous lesions. This clinical fact explains why this treatment does not yield favourable results in gout and in chronic articular rheumatism. It is, therefore, especially in affections of joints, produced by wounds, by the puerperal state, or by blennorrhagia, but only after the disappearance of all the acute symptoms, that the continuous current may bring on either a complete cure, or at least a rapid improvement of the circumarticular changes and the restoration of movement.

16. *Nicaise on the Administration of Chloral.*—At a meeting of the Paris Société de Chirurgie on October 11th (*L'Union Médicale*), M. Nicaise communicated a case of a patient then under his care, in which chloral, administered in relatively small doses, brought on very serious symptoms, which obliged him to suspend its use. The case was that of a man, aged 37, the third toe of whose left foot had been crushed. He continued to work during ten days. On the tenth day, a surgeon, wishing to put the wound into order, removed the nail of the crushed toe. From that day the patient began to suffer; and on the 14th Sept., fifteen days after the accident, tetanic symptoms commenced by dysphagia, and went on to trismus, stiffness of the muscles of the neck, and opisthotonos. On the 21st September the patient came into M. Nicaise's wards. The wound of the toe was then almost completely cicatrised and entirely free from pain, which indicated the absence of any foreign body in the tissues. Tetanus

was very slightly marked, although there was opisthotonos and trismus, allowing slight separation of the jaws. From time to time, though rarely, general shocks affected the whole body, accompanied by slight pain in the region of the injured toe. During five days, M. Nicaise submitted the patient to the use of vapour-baths and of opium in large doses; but seeing that the tetanic symptoms did not improve, he prescribed four grammes (a drachm) of chloral to be given in three doses at intervals of two hours. As this dose produced no effect, the next day the dose of chloral was raised to six grammes. Symptoms of extreme excitement appeared, and were followed by almost complete resolution of the contracted muscles. M. Nicaise then thought it right, on the following days, to reduce the dose of chloral to four grammes. The condition of the patient remained the same during some days; then, on the 3rd October, there was an aggravation following a chill, caused by the opening of a window near the patient's bed. The dose of chloral was then raised to five grammes in a draught, besides two grammes as an enema; seven grammes being thus given during the day. The enema having been expelled almost immediately after its administration, there was really little or no chloral absorbed by that method, and the entire amount of the drug taken during the whole day may be estimated at about five grammes. However, the patient soon afterwards fell into a peculiar comatose condition, not answering to any questions addressed to him, and having become insensible to any kind of stimulation. M. Nicaise, attributing this condition to the action of the chloral, immediately stopped its administration, and by degrees the coma disappeared and the patient awoke. The man completely recovered. M. Nicaise thought it well to call attention to the effects of poisoning by chloral, which showed themselves when that medicine had been taken in a dose of only five grammes. He believes that chloral should be given carefully, beginning by small doses, and only increasing them progressively. The action of chloral is of short duration; but if the dose be repeated, more than three or four grammes at a time should not be given.

17. *Hardy on the Treatment of Locomotor Ataxy.*—Professor Hardy thus summarises the treatment of this affection, at the end of a lecture reproduced in the *Gazette des Hôpitaux*. 'The chapter of treatment is unfortunately but a very short one; for, as a rule, whatever we may do, ataxy follows a progressive course. However, there are some cases in which not only is it possible to relieve the patient, but also to delay the progress of the disease. The treatment which succeeds best, and which is generally advised, is that which has for its base iodide of potassium. Nitrate of silver is likewise a good means, employed concurrently with iodide of potassium, although it has not always fulfilled the promise given by it. Therefore, I give during fifteen consecutive days 2 grammes of iodide of potassium, then during the fifteen following days 2 or 3 centigrammes of nitrate of silver in pills, each containing one centigramme. Finally, recourse is had to rubefacients; blisters, cauteries, applications of tincture of iodine on the sides of the vertebral column, and especially the actual cautery, to the number of ten or fifteen, repeated every eight or ten days. These are not very painful. Sulphurous baths are likewise recommended. For the lightning pains, extract of belladonna, sulphate of quinine, salicylate of soda, in doses of from 3 to 5 grammes, and hypodermic injections, are prescribed. Hydrotherapy has been vaunted for ataxic cases; but I have not

been able to discover that any benefit has been derived from it. I prefer mineral waters, slightly mineralised, but alkaline and warm, such as those of Neris, Plombières, Lamalon, etc. The latter especially tend to diminish the pains, to improve movement, and sometimes even to retard the progress of the disease. Such are the means pursued, not to cure locomotor ataxy, but to retard its progress, and to give relief to the patients who are attacked by it.'

18. *Fronmüller on Homatropin in the Night-sweating of Phthisis.*—Dr. Fronmüller prefers homatropin to atropin as an agent for checking the night sweats of phthisis. He administers it (*Memorab.*, 1882, Heft 1) in the form of pill, containing about one-fourth of a grain of the hydrobromate. This dose, he finds, acts effectually in almost every case, and in the great majority of cases the effect persists over the following night also. In none of his cases was there dilatation of the pupil, and in very few were there other toxic symptoms, such as dryness of the throat, etc. Dr. Fronmüller finds homatropin also an immediate and certain antidote to pilocarpin. In both respects he considers that the action of homatropin is more constant, and quite as effectual as the more dangerous atropin.

19. *Mülberger on the Treatment of Angina Pectoris.*—Summoned to a severe case of this nature (*Memorab.*, 1882, Heft 3), Dr. Mülberger, after watching it for a little, noticed that the patient instinctively pressed both hands against the cardiac region. As the usual household remedies had been tried before his arrival, he determined to follow up this instinctive action. He therefore had the patient stripped, and, throwing his left arm round the thorax, began to press and rub the præcordia with the back of his right fist, giving every now and again a smart blow over the heart. Immediately on his commencing this treatment, the patient expressed himself as feeling relieved, and encouraged him to carry it out energetically. Dr. Mülberger does not pretend to explain the *rationale* of this treatment; but says it may have some analogy to the massage of spasmodically contracted muscles. This was the patient's second attack. No abnormality could be detected in the heart's action after the attack, and no cause was ascertainable for the attack, such as exertion, which caused the first.

JAMES ANDERSON, M.D.

20. *Whiteley on Belladonna in Tetanus.*—Mr. John Whiteley, in the *Brit. Med. Journ.*, October 1882, p. 737, reports two cases of traumatic tetanus that perfectly recovered under belladonna pushed to its full extent. A singular point connected with the administration of the drug was the remarkable tolerance evinced by both patients. [A severe case of trismus, cured by belladonna, is reported in the *Med. Times and Gazette*, 1851, and the value of the drug in tetanus has been many times insisted upon by various observers. *Vide Medical Digest*, sections 1335-4 and 1330-3.—*Rep.*]

21. *Neale on the Chemical Lung.*—Dr. Neale, in the *Lancet* for September, p. 444, reports two experiments with the chemical lung. In the first, it was used in a small room in the Civil Hospital at Aden, in which was a patient who was suffering from phagedænic ulceration of the leg, from which so foul an odour proceeded that it could not be endured in the ordinary ward, even when other disinfectants and deodorisers were freely employed. The result was most satisfactory; so long as the punkah was kept working, the air was odourless and inoffensive. The medical officer at Aden considers

that the punkah is quite able to carry out all that is promised for it, and that it will be found especially useful in infectious disease hospitals and night wards. He suggests that it should be used in the night wards of one of the large Indian gaols, in which the mortality is unequalled in any community throughout the civilised world. In the second experiment the punkah was used in a room crowded with twenty couples dancing for five hours, the windows being shut, in the middle of last June, with the result of keeping the air deliciously cool and pure the whole time.

22. *Harkin on the Treatment of Rheumatism and Gout.*—Dr. Alexander Harkin makes some observations in the *Brit. Med. Journ.*, Sept. 23rd, 1882, p. 554, on rheumatism and gout. The ordinary remedies employed in these diseases are first reviewed. The salicylate of soda, though all powerful over the subjective symptoms, is useless in preventing cardiac complications, or in hyperpyrexia. The alkalies, acting as sedatives on the muscular tissue of the heart, reducing both its excitability and contractility, are of not much good in cutting short the joint-mischief. Dr. Harkin next states his belief in the common origin of the two diseases, basing it chiefly on the fact that they are both amenable to the same remedies. He records a case of each, which, though undoubtedly they would have run the ordinary course, were completely cut short by the application of a large blister over the præcordial region. In the case of rheumatic fever, this appeared to reduce to their normal condition the powers of the centres which regulate the dissipation of heat; and, in the case of gout, to have equalised the depression of heat with that of its production. From this and other considerations, the pathology of rheumatic arthritis must be that it is a specific form of endocarditis of neuropathic origin, generally allied to myocarditis, thus upsetting the generally received theories of its zymotic, constitutional, or autogenetic origin.

23. *Dunbar on Bismuth in Dyspepsia of Children.*—In the *Practitioner* for September, p. 184, Dr. Dunbar calls attention to the efficacy of bismuth in that form of dyspepsia occurring in children, characterised by enlarged papillæ fungiformes on a coated tongue, loss of appetite, dulness, and languor. He gives two minims of liquor bismuthi to a child under one year, three or four times a day. Under this treatment, besides the improvement in the symptoms enumerated, the action of the bowels becomes more regular. This remedy is useless in dyspepsia when the tongue is smooth and clean, and shows no enlargement or redness of the papillæ.

RICHARD NEALE, M.D.

MEDICINE.

RECENT PAPERS.

1. TER-GRIGORIANZ.—Hemialbumosuria. (*Zeitschr. für Physiol. Chem.*, Band vi.)
2. GAUCHER.—Heart-paralysis of the Supinators. (*Revue Méd.*, Aug. 22, 1882.)
3. RAYMOND.—Hemeralopia in Jaundice. (*Le Progrès Méd.*, 1882, No. 40.)
4. POTAIN.—Cardiac Hypertrophy of Neuralgic Origin. (*Le Progrès Méd.*, 1882, No. 40.)
5. TUCZEK.—On Ergotism. (*New York Medical Record*, 1882, No. 621.)
6. LETULLE.—Herpes complicated by Facial Paralysis. (*Archiv de Physiol.*, 1882, No. 1.)

7. KARANUGA.—Hæmoglobinuria in Malaria Fever. (*Centrbl. für die Med. Wissensch.*, 1882, No. 35.)
8. LEFINE.—Retardation of the Ventricular Systole. (*Revue de Méd.*, 1882, No. 3.)
9. GIBSON.—The Action of the Auricles in Health and Disease. (*Edin. Med. Journal*, August 1882.)
10. CHAVASSE.—Aortic Aneurism. (*Med. Times and Gazette*, Sept., p. 376.)
11. BOND.—Scarlatinal Sore Throat. (*Brit. Med. Journ.*, Sept. 23rd, p. 560.)
12. MACKIE.—Bilharzia Hæmatobia. (*Brit. Med. Journ.*, Oct p. 661.)
13. GABBETT.—Acute Local Enteritis. (*Lancet*, Sept., p. 525.)
14. SAMADA.—Symptoms of Encephalitis produced by *Ascaris Lumbricoides*. (*El Sentido Catolico en las Ciencias Medicas*, Sept. 22)
15. ECKSTEIN.—Febrile Albuminuria. (*Deutsche Med. Woch.*, 1881, Nos. 49-51.)
16. PENZOLDT.—The Pathology and Treatment of Hydrophobia. (*Berl. Klin. Woch.*, 1882, No. 3.)

1. *Ter-Grigorianz on Hemialbumosuria.*—Dr. Ter-Grigorianz, of Tiflis, reports (*Zeits. für Physiol. Chemie*, Band vi, Heft 6) a case of hemialbumosuria in a man who had acute dermatitis from mercurial inunction during syphilis. Hemialbumose is the form of albumen first discovered by Bence Jones in the urine of a case of osteomalacia. He found that, on allowing the urine to stand for four days, the hemialbumose became converted into peptone. The hemialbumosuria stopped after a few days, but peptonuria persisted for a week.

2. *Gaucher on Lead-Paralysis of the Supinators.*—Dr. Gaucher (*Revue Méd.*, August 22, 1882) reports two cases of lead-poisoning, in which there was bilateral paralysis, not only of the extensors of each forearm, but also of the long supinators, muscles which, as a rule, are exempt.

3. *Raymond on Hemeralopia in Jaundice.*—Dr. Raymond (*Le Progrès Méd.*, 1882, No. 40) relates a case of persistent jaundice with enlarged liver, but absence of ascites (hypertrophic cirrhosis), in which for the last three months there had been marked night-blindness. This association has been previously described by Cornillon (*Le Progrès Méd.*, 1881, No. 9, and 1882, No. 23), and Perrinaud (*Arch. Gén. de Méd.*, April 1881).

4. *Potain on Cardiac Hypertrophy of Neuralgic Origin.*—M. Potain, in a paper read before the French Association for the Advancement of Science (*Le Prog. Méd.*, 1882, No. 40), relates three interesting cases of cardiac hypertrophy, resulting from neuralgia due to wounds of the left arm, or injuries of the brachial plexus. In all the cases, hypochondriasis was a constant symptom.

5. *Tuczek on Ergotism.*—Dr. Franz Tuczek (*New York Med. Rec.*, 1882, No. 621), in an epidemic of ergotism observed by him at Marburg, found in many cases epileptic seizures with inco-ordination, paræsthesia, pains, and absence of patellar reflex. In four, upon whom *post mortem* examinations were made, the posterior root-zones were sclerosed, and the posterior roots were affected, but not the columns of Goll. Attempts to produce similar changes in animals by feeding with ergot failed.

6. *Letulle on Herpes complicated by Facial Paralysis.*—Dr. Letulle (*Arch. de Physiol.*, 1882, No. 1) relates the case of a man who had an attack of neuralgia, followed by herpes in the region of the right supra-orbital nerve, with erythema and swelling of the right side of the face, which was followed in twenty days by right-sided facial paralysis, with

rapid disappearance of electrical reaction. The whole was attributed to catching cold. Vulpian has observed the frequency of neuralgic pains in connection with facial paralysis.

7. *Karanuga on Hæmoglobinuria in Malarial Fever.*—Dr. Karanuga (Athens 1882, 8vo; *Centralbl. für die Med. Wissen.*, 1882, No. 35), says that the dark colour of the urine in icteric malarial fever is due to the presence of hæmoglobin.

8. *Lépine on Retardation of the Ventricular Systole.*—Lépine (*Rev. de Méd.*, 1882, No. 3) has observed cases in which he has found an abnormal interval to exist between the normal (diastolic) venous pulse in the neck, due to the auricular systole and the systole of the ventricle. He thinks the retardation may be due to some abnormal relation between the force of the ventricle and the resistance it has to overcome, and he suggests that some cases of reduplication of the first sound are due to an audible presystolic auricular contraction.

R. SAUNDBY, M.D.

9. *Gibson on the Action of the Auricles in Health and Disease.*—Dr. Gibson (*Edin. Med. Jour.*, Aug. 1882) has shown that the duration of the auricular contraction varies from .10 to .13 second. The normal venous pulse at the root of the neck is synchronous with the auricular contraction, but whenever the blood-pressure in the right heart is raised from any cause the tricuspid valve gives way, and the pulsation becomes synchronous with the ventricular systole. This is the abnormal venous pulse. So long as the normal venous pulse is present, the right auricle is healthy; if absent, it indicates paralysis of the auricle. He supports Balfour's view, that the basic murmur of anæmia is due to dilatation of the left auricle, and gives a tracing taken from an abnormal pulsation in the second left interspace, which immediately followed the ventricular systole, and, therefore, was apparently caused by systolic regurgitation into the auricle.

10. *Chavasse on Aortic Aneurism.*—Dr. Chavasse records, in the *Med. Times and Gaz.* for September, p. 376, a case of aortic aneurism occurring in a woman, aged 24. There was no history of injury, alcoholism, or specific taint. From the sex, age, and absence of a bruit over a pulsating tumour, seen just below the angle of the left scapula, and in the absence of the ordinary pressure symptoms, it was at first thought the patient was suffering from a sarcoma; but, the signs of erosion of the vertebræ becoming marked, the true nature of the case was apparent. Nothing could be done except relieve the patient's agonising pain with morphia, and, as was expected, she died quite suddenly. At the *post mortem* examination, the aneurism was found to have burst into the pleural cavity. It originated from the junction of the transverse and descending portions of the arch of the aorta, having a mouth of the size of a shilling, and being about the size of a foetal head. There was considerable atheroma of the arch of the aorta, but none was detected elsewhere. The greater frequency of aneurism in men than in women, and its common occurrence in middle or advanced life, make this case well worthy of special note.

11. *Bond on Scarlatinal Sore-Throat.*—There is, in the *Brit. Med. Jour.*, Sept. 23, 1882, p. 560, a paper read by Dr. F. T. Bond, at the meeting of the British Medical Association in Worcester, on the scarlatinal sore-throat and allied affections. Attention is first drawn to the almost impossibility of diagnosing scarlet fever from measles on one side, diphtheria on another, and ordinary catarrh on a

third; but it is pointed out that there is one symptom which, from its invariable presence, reliance can be placed—sore-throat. The rash fever, and all characteristic symptoms, may be absent; but the soreness of the throat is present in every case; it is obvious from this that it is to the throat that remedial treatment should be largely directed. Dr. Bond also points out the almost invariably infectious character of sore-throat when occurring in the young, and the extreme persistency of the infection long after all personal consciousness of soreness has ceased, and even after glandular enlargement has disappeared. A case is related supporting this view, and showing how often the examination of the throat is neglected. A lad, on coming home from school, which had been broken up on account of the appearance of scarlet fever, was thoroughly disinfected before being allowed to enter his home, and was pronounced free from contagion by four medical men; yet, much to every one's surprise, his four sisters became infected with scarlet fever in due course. The cause of this was obvious; the boy was himself suffering from sore-throat, contracted at the school just before leaving, and he had thus carried the contagion, in spite of washings and fumigations, into the house, simply from neglecting to examine his throat.

12. *Mackie on Bilharzia Hæmatobia.*—Dr. Mackie, in the *Brit. Med. Jour.* for Oct., p. 661, points out the symptoms met with in Egypt, due to the Bilharzia hæmatobia, when it takes its habitat in the rectum. These are shortly, straining at stool; weight, discomfort, and pain about the rectum; constant desire to go to stool; passing only a little mucus and blood; pain at the hypogastrium; and emaciation. The diagnosis between piles on the one hand, and dysentery on the other, can only be cleared up by digital exploration of the rectum; as high as the forefinger can reach, but not at the lower part, small, soft, but firm, nodules will be felt, generally about the size of a small bean. If one of these be twisted off with a hæmorrhoidal forceps and examined microscopically, its blood-vessels will be found crowded with the ova of Bilharzia hæmatobia. This disease may be present, without the patient ever having shown any sign of urinary disorder, or any ova being found in the urine after repeated and careful microscopic examinations.

13. *Gabbett on Acute Local Enteritis.*—Dr. Gabbett records, in the *Lancet* for September, p. 525, a case of a man, aged 43, who was seized with all the signs of acute obstruction of the bowels immediately after leaving his bed one morning. He was given a dose of castor-oil and opium, with little or no result; afterwards, hot fomentations were applied to the abdomen, and belladonna given internally. Forty-eight hours after the onset of the symptoms, the patient suddenly sat up in bed, and almost immediately fell back and died. From his mouth flowed brownish-yellow fluid in large quantities; the vomit was before this simply bilious. At the *post mortem* examination there was no band, twist, intussusception, or hernia found; but a piece of the ileum, about three inches long, situated about two feet from the ileo-cæcal valve, was of an intensely red colour. The mesentery attached to this contained an oblong purple mass. Above this part the intestines were filled with yellowish-brown fluid, and the ileum below with thick pasty material. No other important morbid appearances were discovered, the heart and other organs being healthy. The cause of the sudden death was, no doubt, acute distension of the sto-

mach. The clot in the mesentery was the only thing found which could account for the symptoms; whether this was primary or not it is impossible to determine. It was equally impossible to diagnose or to treat accurately the affection during life.

R. NEALE, M.D.

14. *Samada on Symptoms of Encephalitis Produced by Ascaris Lumbricoides.*—Dr. D. Juan Samada reports (*El Sentido Catolico en las Ciencias Medicas*, Sept. 22) a case in which symptoms of acute encephalitis (? meningitis) were produced by the presence of a large number of ascarides lumbricoides. The patient was a lad about eight years old. His attack commenced with severe headache, attributed to a fall sustained a few days before. This was followed by photophobia, conjunctival injection, and later by profound coma. Constipation was present, and, as a saline purgative did not produce an evacuation, calomel and aloes were administered. This produced several evacuations, each containing about thirty ascarides. The head-symptoms ceased from the moment the bowels were purged, 'as if by magic'.

WALTER PYE.

15. *Eckstein on Febrile Albuminuria.*—This writer distinguishes (*Deutsch. Med. Woch.*, 1881, Nos. 49-51) three classes of cases where albumen occurs in the urine of acute febrile disease; first, albuminuria, caused by acute nephritis; second, the so-called febrile albuminuria; and third, albuminuria caused by venous hyperæmia. The last form, in which the urine is small in quantity and of high specific gravity, occasionally containing casts and renal epithelium, is diagnosed mainly by the presence of other symptoms pointing to venous hyperæmia, such as cyanosis, enlargement of the liver, and dyspnoea. Dr. Eckstein opposes the belief that venous hyperæmia is the sole cause of albuminuria in febrile disease. He believes that it is the sole cause of the albuminuria occurring in acute croupous pneumonia, and in rapidly formed pleuritic effusion, the local affection acting mechanically, first on the right side of the heart, then on the venous system generally. Acute nephritis Dr. Eckstein believes to be a metastatic inflammation, an infective process, in which the micro-organism, although it has not yet been demonstrated, as in kidney-affection from diphtheria or pyæmia, will at no distant date be isolated. The result of acute nephritis is either complete recovery or death, very rarely chronic nephritis. In the so-called febrile albuminuria, which Dr. Eckstein mainly considers, the amount of urine is but slightly diminished, according to the severity of the fever itself; the amount of albumen is moderate, and the normal excretory constituents of the urine are not diminished. That the albuminuria in such cases is caused by hyperæmia of the kidney, either active or passive, seems to Dr. Eckstein improbable; because the first result of a congestive hyperæmia would be an increased amount of urine which is not present; and on the other hand, there is no reason to suppose a passive hyperæmia, except in such cases as have been already classed under albuminuria from direct venous congestion. Runeberg has lately explained the diminished secretion and albuminuria in febrile diseases by the degeneration of the heart-muscle and consequent fall of arterial tension; but, as Dr. Eckstein points out, in many diseases where the arterial tension is reduced to a very low point, there may be absolutely no albumen in the urine. That the albuminuria is caused simply by the abnormal temperature, or by an alteration of the albumen of the blood, is not, Dr. Eckstein believes, supported by

fact; for the albuminuria is frequently in no relation whatever to the temperature, and the albumen in the great majority of instances in no way differs from the serum albumen of the blood. After a full and interesting discussion as to the pathological basis of febrile albuminuria and the varieties of it in different affections, Dr. Eckstein sums up his views as follows. Febrile albuminuria depends on a local process in the kidneys of an inflammatory nature, or at least closely related to inflammation, and having its site mainly in the epithelium of the kidney, cloudy swelling, albuminous infiltration, or parenchymatous inflammation. This process is probably caused by an infection of the kidneys, either from the passage through them of low parasitic organisms, or from the inflammatory action of soluble toxic substances passing through them. The same infection acting in a stronger degree can produce acute nephritis. Acute infective nephritis, therefore, and febrile renal affection, are only different degrees of the same process, or, in other words, the febrile renal affection is an aborted acute infective nephritis.

16. *Penzoldt on the Pathology and Treatment of Hydrophobia.*—The patient in this case (*Berl. Klin. Woch.*, 1882, No. 3) was a boy aged 11, who was bitten in the lip by a dog, apparently healthy, but really in the last day of the incubation stage, dying soon afterwards of rabies. The wound was thoroughly cauterised within half an hour after the bite; but, after an incubation of eleven days, symptoms of hydrophobia set in. On the last day of the incubation, when the wound was now quite healed, there appeared a moderate swelling and tenderness of the glands at the angle of the jaw on both sides. The first prodromal symptoms were headache, sleeplessness, and frequent sneezing, with pain in the left eye, which had been slightly bruised at the time of the bite. The frequent sneezing has already been observed in a case of hydrophobia, where the bite affected the nose and upper lip, and seems to be a reflex irritation from the cicatrix. The treatment adopted as giving theoretically the best promise of success was the subcutaneous injection of curare. Subcutaneous injection of $\frac{1}{8}$ grain of the curare, used rapidly, paralysed and, without artificial respiration, killed a dog weighing thirteen pounds. For the patient, first a dose of 1-13th grain was injected; forty minutes afterwards, another of 1-7th grain, which was followed by a comparatively free interval of five hours, when four attacks occurred in rapid succession. Another dose of 1-7th grain was followed by a free interval of four hours. After this, doses of 1-7th grain, and ultimately $\frac{1}{2}$ grain, were repeated at intervals of half an hour to an hour, so that within ten hours and a quarter the boy had had injected subcutaneously $5\frac{1}{2}$ grains of curare. In all, there was injected within twenty-six hours $6\frac{1}{2}$ grains. This, considering the boy's age, is probably one of the largest doses of curare yet given. Offenber records a case where 3 grains were injected in four hours and a half. The patient was an adult female peasant, believed by Offenber to have been cured by this treatment of an attack of hydrophobia. The evidence as to the disease having been actually lyssa, and not hysteria combined with lyssophobia, is not very strong. With regard to the treatment in the present case, once only during the administration of the drug was there cyanosis and superficial breathing, with loss of sensibility, which soon passed off. At first the injections manifestly diminished the attacks, a fact borne witness to by Ziemssen, who watched

the case, and has seen fourteen cases of hydrophobia. Ultimately, however, the curare was absolutely powerless, and the attacks took the form of acute mania, which could be controlled only by chloroform, under the influence of which the patient was kept for six hours, when death occurred.

JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. BENHAM.—Intestinal Obstruction. (*Brit. Med. Jour.*, July 1882, p. 165.)
2. JORDAN.—A Laminated Plaster Splint. (*Brit. Med. Jour.*, July 1882, p. 81.)
3. SYMPSON.—Wire Ligature for Approximating Divided Bone. (*Brit. Med. Jour.*, July 1882, p. 166.)
4. STRAHAN.—Acute Idiopathic Arteritis. (*Lancet*, July 1882, p. 49.)
5. FISHER.—Double Ginglymus of the Knee-Joint. (*Lancet*, Aug. 1882, p. 297.)
6. FRANZIUS, E.—On Dental Caries. (*Vratch*, 1882, No. 8, pp. 115-6.)
7. VELIAMINOFF, N. A.—On Iodoform as a Surgical Dressing. (*Vratch*, 1882, No. 9, pp. 133-41.)
8. TRISHMAN.—A Case of Iodoform Insanity. (*Vratch*, 1882, No. 12.)
9. LEEDUN.—Complete Lateral Dislocation of the Elbow-Joint. (*Philad. Med. and Surg. Rep.*)
10. ALEXANDER.—Treatment of Epilepsy by Ligature of Large Arteries. (*Brain*.)
11. SHEPHERD.—Fracture of the Astragalus. (*Med. News*.)
12. KELSEY.—Treatment of Hæmorrhoids by Injections of Carbolic Acid. (*New York Med. Jour. and Obstet. Rev. and Canada Lancet*.)
13. KAPPELER.—On a Case of Gastrostomy. (*Deutsche Zeit. für Chir.*, Band xvii, Heft I and 2.)
14. PILING.—Traumatic Hæmato-Pericardium. (*St. Petersburg. Med. Woch.*, No. 22, 1882.)

1. *Benham on Intestinal Obstruction*.—In the *Brit. Med. Jour.*, July 1882, p. 165, Dr. H. J. Benham makes a few observations on the diagnosis and treatment of intestinal obstruction, points out the importance of an early diagnosis, and divides the cases into chronic, late acute, and early acute. In all the forms falling under the two latter classes, he advocates an early operation, pointing out the danger of gangrene, should interference be put off too long. Dr. Benham believes that the time is not far distant when laparotomy in these cases will take its place in surgery, side by side with the parallel operation of kelotomy for external strangulated hernia.

2. *Jordan on a Laminated Plaster Splint*.—In the *Brit. Med. Jour.*, July 1882, p. 81, there is a clinical lecture by Mr. Furneaux Jordan, on a splint which has been used for some years at the Queen's Hospital, Birmingham, and which, from its simplicity, can be used for almost any purpose. It consists of a few sheets of superimposed muslin, cut to fit the part, with plaster-of-Paris between the sheets. This is placed in water, which should be hot, both for the comfort of the patient and rapidity in setting. It is left in the water for about a minute, squeezed out gently, and then spread out neatly and smoothly over the part. This is applicable to other materials; but check muslin has been found the best, six or seven layers of which make a good average splint. Such a splint may be applied to any part, as

a jacket, sheet splint for fractured femur, for the elbow-joint, or to form a jury-mast in caries of the cervical vertebræ; and it is found especially useful in knee-joint disease. Apart from its universality, it is cheap, durable, and simple.

3. *Sympson on Wire Ligatures for Approximating Divided Bones*.—Mr. Sympson reports two cases in the *Brit. Med. Jour.*, July 1882, p. 166, in which he used wire sutures for the approximation of divided bones, with complete success. The first, a man, aged 30, having sustained a severe injury of the foot, Pirogoff's amputation was performed, and the opposed surfaces of the tibia and os calcis were retained in position by wire sutures, which were left in for six weeks. The patient, after seven weeks, could walk well. The second, a boy aged seven, suffered from disease of the knee-joint for three years. The joint was excised, and the opposed surfaces of the femur and tibia united by two wire sutures. This was a particularly unfavourable case for operation, the child being ill-nourished, and there being caseous material in the portion of the tibia removed. Yet an excellent limb was left, but slightly shortened, on which the boy can walk well. Mr. Sympson has found this to be the most accurate means of bringing together the ends of bones.

4. *Strahan on Acute Idiopathic Arteritis*.—Dr. Strahan reports a most interesting case of arteritis occurring in an acute maniac, in the *Lancet*, July 1882, p. 49. The patient, a female, aged 49, after a two hours' walk, had a rigor. The following day, the right leg was discovered to be quite cold up to the knee, the skin being pale and mottled with purple; volition and sensation were lost; the left foot, and half way up the left tibia, were in a similar condition. The temperature was over 100 deg., and remained high till death. The left hand was colder than the right, and pulseless, though the patient was using this hand vigorously. A line of demarcation began to form just below the patella on the right leg on the third day, and the patient gradually sank, and died on the fourth day. The necropsy showed the right femoral artery to be hard and round, being filled with a firm clot. The wall of the artery was highly injected; the inner surface was rough, darkened in colour, and covered with nodules of black blood. The only discoverable cause of this affection is a morbid state of the system, it generally appearing in patients beyond fifty, of broken constitution.

5. *Fischer on Double Ginglymus of the Knee-Joint*.—In the *Lancet*, of Aug. 1882, p. 297, Dr. Fischer reports a case of double ginglymus of the knee-joint in an otherwise healthy new-born child. There was complete absence of the patella; the leg was folded on the thigh in front, the toes resting in the groin. On straightening the knee, the muscles drew the leg back to its former position. The case is being treated by a splint of poroplastic felt, shaped to the back of the thigh and calf, with a ginglymus joint opposite the knee-joint, allowing only the natural movements of the joint. R. NEALE, M.D.

6. *Franzius on Dental Caries*.—The author (*Vratch*, 1882, No. 8) examined the state of the teeth in 650 soldiers, and found dental caries in 258 of them, or nearly in 40 per cent. The results of Dr. Franzius' investigations are summarised as follows. 1. Of all the teeth, the third molar is the most often affected with caries (380 out of every 601 destroyed teeth). 2. Carious destruction of the third molar teeth makes up one-half of all cases of dental caries (129 out of 258 patients). 3. The teeth are affected with caries in a certain successive order;

first of all the lower third molar is attacked, then the upper, then the lower fourth molar, and so on; the incisors and the canine teeth of the lower jaw stand last in the line. 4. The durability of the upper teeth stands to that of the lower in the proportion of three to two. 5. The teeth in persons of fair complexion and hair are less durable than in those of dark complexion and hair (40 per cent. to 37 per cent.) 6. Stature has a manifest influence on the durability of the teeth. 7. The durability of the teeth increases with the decrease of height, and *vice versa*. (The explanation of this curious fact the author seeks in a less perfect peripheric circulation in tall men, comparatively with short subjects.) 8. The right teeth show a greater vitality than the left. 9. The conditions of a soldier's life do not show any special harmful influence on the state of teeth. [Dr. Franzius, therefore, confirms, in many details, the results published by Professor N. V. Sklifassorvsky in the *Vratch*, 1880, Nos. 5 and 6, and obtained through examination of 400 students living in St. Petersburg. Only 112, or 28 per cent. of these presented healthy teeth; in 282, molar caries was found; in 249 of them one or more third molar teeth, and in 219 the lower molar teeth were destroyed. In the *British Medical Journal*, 1881, December 3rd, p. 900, is reported a very interesting (Dr. B. W. Richardson's) paper on the causes of dental caries. This author found dental caries in more than 80 per cent. of his 4,000 patients. It is worthy of attention that exactly the same figure (80 per cent.) is given by Professor Sklifassorvsky for the constant inhabitants of St. Petersburg.—*Rep.*]

7. *Veliaminoff on Iodoform Dressing*.—The author furnishes a detailed report (in the *Vratch*, 1882, No. 9), on sixty cases operated on by him and Professor Reier, and subsequently dressed with iodoform powder and gauze (prepared after Mikulicz's instructions). The list of operations runs thus: two cases of tying large vessels, eleven excisions of large tumours, four plastic operations, six excisions of the tongue, larynx, and resections of the upper and lower jaws, one amputation of the thigh, twenty-eight resections, osteotomies, trephinations of long bones and the mastoid process, one operation for hydrocele, one colotomy, four incisions of large abscesses, two operations for empyema. Three patients died; one (operated on for lingual cancer) from a secondary cancerous deposit in the liver; one, after resection of the hip, from tuberculous meningitis; and the third, after excision of the larynx, from purulent pneumonia. In the remaining fifty-seven patients, the results were the best possible. In all but three cases (of resection with insufficient drainage), the course of the wound was perfectly aseptic and apyretic; the discharge was very scanty, mucous, odourless. Accordingly, in regard to the local action of iodoform on surgical wounds, Dr. Veliaminoff fully concurs in opinion with Professor von Mosetig-Moorhof, and attributes to this powerful antiseptic agent excellent properties alone, without any drawbacks; and the application of the iodoform dressing to the operations about the mouth he, like Professor Billroth and Dr. Wölfer (see the *LONDON MEDICAL RECORD*, 1882, April, p. 142), regards as the most important surgical acquisition made within these days; for, he says, these operations have become now as void of danger as operations on the extremities since the introduction of Lister's dressing. On the other hand, the author does not shut his eyes to the possibility of ill-effects being produced by iodoform upon the general

system. Like Schede (see the *LONDON MEDICAL RECORD*, 1882, May, p. 177, and July, p. 279), he met various degrees of iodoform poisoning. In some instances, there was observed a sudden elevation of temperature (as high as 104 deg., and even, in a child, 106 deg. Fahr.), which lasted some hours, and then spontaneously disappeared. In others, immediately after an operation, very obstinate vomiting followed, which lasted three, four, or five days, and was accompanied with very considerable collapse and extremely rapid pulse (160). In other cases again, on the tenth to the fifteenth day after operation, and the application of the iodoform, there suddenly appeared loss of appetite, sickness, tremor, depression of spirits, and then a sudden change of this state into one of high excitement (shouting, hallucinations, delirium of persecution, hysteroid fits, fear of death, and fear of going mad); the last two symptoms the author regards as characteristic of iodoform poisoning. In some of the latter cases, the psychical disturbance disappeared and did not return; but in others it had an intermittent type, and came on in paroxysms separated from each other by completely lucid intervals. The duration of these mental symptoms varied from a few hours and days to three weeks, and seemed to depend not so much on the quantity of iodoform used (which in none of the cases was more than two ounces) as on the individual predisposition of the patients. Attentive consideration of all his own cases of poisoning, leads Dr. Veliaminoff to recommend moderation in the surgical use of the iodoform in certain cases; 1. In patients with extensive wounds penetrating into thick layers of fat; 2. In aged subjects; 3. In patients suffering from obesity, fatty change of visceral organs, heart-diseases, or considerable general exhaustion; 4. In nervous, hysterical, and hypochondriac subjects. [See Professor Kocher's paper in the *LONDON MEDICAL RECORD*, June 1882, p. 236, and Mosetig-Moorhof, *ibid.*, July, p. 278, as well as Kuster's and Mundy's articles, *ibid.*, May, p. 177.—*Rep.*]

8. *Trishman on a Case of Iodoform Insanity*.—In the *Vratch*, 1882, No. 12, Dr. Trishman details a case of a weak and anæmic patient, aged 21, who presented five large crural ulcers (seemingly of luetic origin), and was treated by the application of iodoform powder. Forty days after the beginning of this treatment, there suddenly appeared headache, general prostration, rise of temperature to 39.2 deg. Cent. (102.5 Fahr.), and, a little later, maniacal delirium with obstinate sleeplessness. The symptoms lasted five days, and disappeared without any special treatment.

V. IDELSON, M.D.

9. *Leedun on Complete Lateral Dislocation of the Elbow-joint*.—Dr. Oscar Leedun records, in the *Phil. Med. and Surg. Rep.*, an unique case of complete outward dislocation of both bones of the forearm, produced by a fall from a cart, in which the left arm was caught in the wheel. The olecranon was twisted around nearly in front of the joint, passing completely over the external condyle, while the head of the radius was dislocated forward and inward. Reduction was successfully accomplished, some stiffness of the joint remaining.

10. *Alexander on the Treatment of Epilepsy by Ligature of the Vertebral Arteries*.—Dr. Alexander of Liverpool, in *Brain*, gives an account of the treatment of twenty-one inveterate cases of epilepsy by ligature of the vertebrals. Three of the cases have been free from fits for a year. In nine others, the freedom from fits has been so long that a cure may

be said to have resulted, and eight have 'improved in so many respects, or are improving so steadily, that the operation would be justifiable were no better results ever obtained'. Dr. Alexander considers that the treatment will become general for that class of cases of epilepsy which are uninfluenced by drugs or removal of all possible peripheral causes. He finds the artery by making an incision of three inches in length along the external border of the sterno-mastoid muscle, commencing about an inch above the clavicle, and at the lower end and outer side of the external jugular vein. The layers of fascia are cut through, until the fatty tissue over the anterior scalenus is reached. The sulcus between this muscle and the longus colli being reached, the sixth cervical vertebra is easily made out. The artery will then be easily found, provided no veins are met with. There is little or no hæmorrhage if the operation be performed carefully. To afford a reasonable hope of success, the operation should not be put off too long, but should be performed when it is evident that no hope of cure arises from the judicious use of medicinal agents. Even in cases of chronic epilepsy, Dr. Alexander has found the operation beneficial, and he is inclined to think that many of even the most inveterate of these cases can be cured. He considers that the operation acts by diminishing in a marked degree the excessive sensitiveness of the medulla, and that, before the collateral circulation is re-established, the sensibility of the epileptic centres is so benumbed that they do not respond as formerly. There was only one death in over thirty operations. The cause of death in this case was septic pleurisy, due to the tearing off of the antiseptic bandages by the patient, who was an idiotic girl.

11. *Shepherd on Fracture of the Astragalus.*—At a recent meeting of the Medico-Chirurgical Society of Montreal (*Medical News*), Dr. Shepherd, Demonstrator of Anatomy in McGill College, read a paper on a hitherto undescribed fracture of the astragalus, and exhibited three specimens, all of which were obtained from dissecting-room subjects. The portion fractured was the process external to the groove for the tendon of the flexor longus hallucis muscle, to which the posterior fasciculus of the external lateral ligament of the ankle-joint was attached. Dr. Shepherd thought that it was produced by extreme flexion of the ankle with a twist of the foot outwards, and was probably one of the lesions which occurred in severe sprain. He suggested that it might account for some of the cases of severe sprain which recovered with impaired movement of the joint. The union was fibrous. He was not able to produce the fracture experimentally. At a subsequent meeting, Dr. Shepherd showed a fourth specimen, in which there was bony union. Unfortunately, there was no history of any of the cases.

12. *Kelsey on the Treatment of Hæmorrhoids by Injection of Carbolic Acid.*—Dr. Charles B. Kelsey, Surgeon to St. Paul's Infirmary for Diseases of the Rectum, New York, recently opened a discussion on the treatment of hæmorrhoids, at a meeting of the New York Clinical Society, by reading a paper on the treatment by injection of carbolic acid. The paper, which appears in the August number of the *New York Med. Jour. and Obstet. Review*, opens with condensed histories of a number of cases, after which he remarks that, the more he practises this plan, the more confidence he gains in it. With solutions of proper strength, the danger of causing sloughing of the tumours is very slight. There are no objections to this method which do not apply

equally to others. He has once seen considerable ulceration result from it in the hands of another; but he has seen an equal amount follow the application of the ligature; and he does not consider this as a danger greatly to be feared when injections of proper strength are introduced in the proper way. It is applicable to all cases; is especially adapted to bad cases; and may be used where a cutting operation is inadmissible. It acts by setting up an amount of irritation within the tumour which results in an increase of connective tissue, a closure of the vascular loops, and a consequent hardening and decrease in the size of the hæmorrhoid. Except when sloughing occurs, the tumours are not, therefore removed, but are rendered inert, so that they no longer either bleed or come down outside of the body. In cases in which the sphincter has become weakened by distension, the injections will also have a decided effect in contracting the anal orifice, as injections of ergot or strychnine do in cases of prolapsus. He has used this method of treatment now many times, and has never, except in one case, had reason to regret using it or to be dissatisfied with its results, so far as he has been able to follow them. Although slow to advocate any one treatment of this affection to the exclusion of all others, he now generally adopts this from the outset in each case, reserving Allingham's operation for any in which the injections may fail. As yet, he has met with no such case. Its advantages over all other methods, provided its results prove equally satisfactory, are manifest. The patient is not terrified at the outset by the prospect of surgical operation, is not confined to his bed, and is not subjected to any suffering. The cure goes on painlessly, and almost without his consciousness. The method requires some practice and some skill in manipulation, in getting a good view of the point to be injected, and in making the injection properly; but this is soon acquired; and he is more and more convinced that the fear of producing ulceration is an exaggerated one, and that, when ulceration is produced, it is a result either of a solution of too great strength, or of one improperly administered. The strength Dr. Kelsey uses is one of carbolic acid to six of glycerine and six of water; of this, five minims are injected into each tumour at intervals of a week.

13. *Kappeler on a Case of Gastrostomy.*—Dr. O. Kappeler, of Munsterlingen, reports in the *Deutsche Zeit. für Chirurgie*, Band xvii, Heft 1 and 2, a case of impermeable carcinomatous stricture of the œsophagus, in which he performed gastrostomy. The patient was a man aged 69, who had suffered during the previous three months from much difficulty in swallowing, and at last found it quite impossible to take even fluid nourishment. When first seen by Dr. Kappeler in October 1881, this man was anæmic and much emaciated, suffered much from thirst, and was constantly troubled by a profuse discharge from the mouth of saliva and mucus. During the first four days of the treatment, fluid food could be introduced into the stomach through a narrow tube, passed through a long stricture with rough and hard walls in the lower half of the œsophagus. At the end of this period the structure became quite impermeable, fluid could not be swallowed, and it was found impossible to pass even a very small tube. On October 24th, gastrostomy was performed, with attention to all antiseptic precautions, and in a room heated to 54 deg. F. The incision in the abdominal wall was about three inches and a half in length, and, commencing about half an inch below the level

of the xiphoid cartilage, was carried downwards along the course of, and at a distance of two fingers' breadths from, the margins of the costal cartilages on the left side. The stomach was found without difficulty, and the anterior surface of the viscus was stitched to the edges of the superficial wound by twenty-four catgut sutures passed between the muscular and mucous gastric coats, and not perforating the latter. On October 28th, the stomach having contracted adhesions with the abdominal wall, an opening was made into the stomach large enough to admit a gum-elastic tube of the thickness of a finger. No bad symptoms occurred that might be attributed to the operation, but for a few days the patient remained in a condition of extreme exhaustion, and much difficulty was experienced in supplying nourishment by the stomach, in consequence of the regurgitation of the fluid food through the large artificial opening. This difficulty was overcome after a time by introducing a large tube, and subsequently by using a specially contrived retentive apparatus; and then the patient was frequently supplied with milk, pancreatic preparation, and wine. On November 5th he was able to move about, and during the next ten days improved much in health and gained in weight. On November 16th, however, he suddenly presented symptoms of mischief in the lungs, and five days later death resulted from dyspnoea and exhaustion. At the necropsy the oesophagus was found to be completely blocked by a large mass of epithelioma, the lower margin of which was situated at a distance of about two inches and a quarter above the cardiac end of the stomach. A portion of this growth communicated directly with the inferior lobe of the right lung. This lobe was studded with small abscesses, and deposits of soft and pale structure. Several small abscesses were found in the upper lobe of this lung, and also in the lower lobe of the lung on the left side. The author, in his comments on this case, particularly directs attention to the facts, that before the operation the stenosis of the oesophagus was so complete, that not a drop of fluid could be forced down through the obstruction; that, in consequence of commencing ulceration of the carcinomatous growth, it was found inadvisable to continue the use of the bougie even with the patient in a condition of anaesthesia; and that, in spite of systematic feeding by the large intestine, the patient rapidly lost strength and became so exhausted as to render doubtful the prospects of any operative treatment. Notwithstanding these unfavourable conditions, the gastrostomy had such good results, that the patient's life was prolonged for some weeks, and his condition during this period was rendered more tolerable. In cases of cancerous stenosis of the oesophagus, gastrostomy, it is held, should not be performed until a late stage of the disease; since, as the operation under such circumstances, is merely palliative, and considering the results that have hitherto been attained from its performance, so long as food can be passed into the stomach, even in small quantities, no surgeon would be justified in establishing a gastric fistula, and no intelligent patient would submit to such a proceeding, which, though it might relieve some troublesome symptoms and postpone death for a short time, would certainly not prevent this result. There can be no doubt, however, that, as the risks of this operation have now been reduced to a minimum through improvements in the treatment of wounds, it may be justifiably performed in cases of complete or almost complete cancerous stenosis of the oesophagus,

in which starvation is imminent. In the most favourable cases for such treatment, the patient is not likely to survive the operation for more than forty days.

14. *Tiling on Traumatic Hæmato-pericardium.*—Dr. G. Tiling (*St. Petersb. Med. Woch.*, No. 22, 1882) relates the details of a case of effusion of blood into the pericardium after an injury, by which the chest had been severely squeezed without fracture of ribs or sternum. The only external evidence of injury was a small tender swelling on the right border of the middle piece of the sternum, and a painful spot under the right clavicle. Slight hæmoptysis followed the injury, but did not last long. The cardiac dullness was found to extend over the right border of the sternum; the apex-beat could only just be felt, but not localised. The heart-sounds, on auscultation, were masked by a variety of sounds, blowing, rubbing, and splashing, except in the second intercostal space, where the sounds were clear. Diffuse râles were heard over both sides of the chest, and at the base of the right lung there were deficient breathing, fine crepitation, and slight dullness. No indications of ruptured lung or of emphysema were present, although the peculiar splashing sound heard over the heart would seem to indicate a partial pneumo-pericardium. A similar sound has, however, been recorded by Morel-Lavallée, as having occurred in a case of hæmorrhage into the pericardium, in which no trace of air could be discovered on *post mortem* examination. On the third day after the injury, the rubbing and splashing sounds disappeared, and the cardiac dullness increased upwards; but the apex-beat could be clearly made out in the fourth intercostal space. The dullness then gradually diminished, and the cardiac signs became normal in about three weeks. Dr. Tiling, in referring to the literature of the subject, points out the rarity of cases of injury to the pericardium alone, without any fracture on the one side, or damage to the heart on the other. Of one case recorded by Billroth, he says that, 'pericarditis occurred after a blow in the cardiac area, but the presence of a hæmato-pericardium was not mentioned'. He does not, however, attempt to explain the reasons for his diagnosis of hæmato-pericardium in the case here recorded.

E. CLIFFORD BEALE, M.B.

PATHOLOGY.

RECENT PAPERS.

1. PÆLCHEN.—Cerebral Softening after Poisoning by Coal-Vapour. (*Berl. Klin. Woch.*, 1882, No. 26.)
2. SCHUCHARDT.—Bright's Disease without Albuminuria till eight days before death. (*Berl. Klin. Woch.*, 1882, No. 41.)
3. BRAUN.—The Origin of the Bothriocephalus Latus. (*St. Petersb. Med. Woch.*, No. 16, 1882.)
4. PEREIRA.—The Blood in Beriberi. (*Gazz. Med. da Bahia*; and *Gazz. Med. Italiana Lombardia*, July 8.)
5. BROSE.—Contribution to the Histology of Bright's Disease. (*Phil. Med. Times*, March 11.)
6. LITTEN.—Narrowing of the Stream-area in the Pulmonary Arteries. (*Berlin Klin. Woch.*, 1882, No. 28.)
7. BASSANOVICH, T.—A Case of Polyorchismus. (*Vratch*, 1882, No. 12, p. 194.)
8. PEKELHARING.—The Lesions in the Spinal Cord in Pseudo-hypertrophic Paralysis. (*Virchow's Archiv*, Band lxxxix, Heft 2.)
9. RIBBERT.—Compensatory Hypertrophy of the Kidneys. (*Virchow's Archiv*, Band lxxxviii, Heft 1.)

10. AUFRECHT.—The Pathogeny of Gastric Ulcer. (*Centralbl. für die Med. Wiss.*, 1882, No. 31.)
 11. BIRCH-HIRCHFELD.—The Syphilitic Bacillus. (*Centralbl. für die Med. Wiss.*, 1882, No. 33.)
 12. BROWN-SÉQUARD.—The Hereditary Transmission of Artificially produced Lesions. (*Comptes Rendus*, tome xciv.)
 13. LITTEN.—Mycotic Renal Disease. (*Zeitschr. für Klin. Med.*, Band iv.)
 14. LEYDEN.—Diabetic Phthisis (*Zeitschr. für Klin. Med.*, Band iv.)

1. *Pœlchen on Cerebral Softening after Poisoning by Coal.*—In his article on this subject, the writer gives a full abstract of the literature of the subject (*Berl. Klin. Woch.*, 1882, No. 26). In seven out of ten fatal cases recorded, there was cerebral softening, as proved *post mortem*, and in one of the remaining three cases there was no *post mortem* examination. These cases, along with Klebs's experiments on this point, substantiate, Dr. Pœlchen believes, the causal association of cerebral softening and carbonic oxide poisoning. In the case recorded by Dr. Pœlchen, the patient, a female aged 37, was poisoned by the vapour of a stove. She lay two days insensible; recovered sufficiently to go about her usual work; but a month later began to become mentally and physically weaker, till at last she took to bed. When seen she was quite insensible to surrounding circumstances, lying speechless on her back, staring into space. The limbs were spasmodically flexed, especially the right; sensation was keener on the right than on the left. The knee-jerk was exaggerated on the right side as compared with the left. There was paralysis of the bladder and rectum. The pupils were equal and very narrow. The patient gradually sank, and died about six weeks from the date of the poisoning. Two days before death, the rigidity disappeared. The *post mortem* examination showed symmetrical softening, involving the internal capsule and the lenticular nucleus of the corpus striatum. No obstruction of the vessels supplying these parts was discovered. The other organs showed no marked abnormality. As to the cause of the softening in these cases, Dr. Pœlchen believes that it depends on fatty degeneration of the tunica intima of the blood-vessels, which depends much for its nutrition on the contained blood. The intima then gives way, and the blood, getting between the intima and adventitia, blocks the vessel.

2. *Schuchardt on a Case of Bright's Disease without Albuminuria till within Eight Days of Death.*—Absence of albumen from the urine in cases of advanced Bright's disease is, as is well known, not uncommon; and cases have even been recorded where no albumen was observed during life. It is not common, however, for the urine of a patient, long under exact observation in hospital, to show no evidence of disease by the ordinary tests till eight days before death, and yet for the *post mortem* examination to show that the kidneys were so atrophied that only a seventh part of their substance was functional. The patient, a female, aged 48, was for over three months in the Breslau Hospital, suffering from general dropsy and bronchitis. Mitral insufficiency, with hypertrophy of the heart, was diagnosed, but was not considered enough to account for the symptoms. Signs of kidney-affection were carefully looked for, but not found, the urine being of normal colour and quantity, acid, 1,020, without albumen or abnormal constituents. Eight days before death, the urine diminished in quantity, in colour it was clear brown-red, of specific gravity 1,023-1,025. It con-

tained albumen, hyaline casts, and white and red blood-corpuscles in moderate number. Dr. Schuchardt records the *post mortem* appearances as observed by himself (*Berl. Klin. Woch.*, 1882, No. 41). There were complete atrophy of the right kidney (76 grains), and of great part of the left, with interstitial and parenchymatous nephritis of the rest of the left kidney (635 grains); dilatation of the heart, with hypertrophy of the left ventricle and fatty degeneration of the heart-muscle; chronic endarteritis of the aorta and other large arteries, including the renals; pleurisy; and lobular pneumonia. Microscopic examination showed the usual appearances of granular contracted kidney, only a small part of the left kidney showing comparatively healthy urinary tubules and glomeruli. There was no trace whatever of recent inflammation in the right kidney or in great part of the left, but in the remaining part of the left kidney the interstitial tissue was thickly infiltrated with small cells, and the epithelium was in a condition of fatty degeneration. Dr. Schuchardt considers that this case strongly supports Heidenhain's theory as to the action of the different portions of the kidney in the separation of the urine from the blood. Heidenhain asserts, and gives experiments to prove, that the separation of the water and salts of the urine occurs in the glomeruli, while the specific urinary constituents are secreted by the action of the epithelium of the urinary tubules. He explains the absence of albumen in healthy urine, although secreted from an albuminous fluid, by the presence of the complete epithelial covering of the glomeruli. In the fact that a seventh part of the normal renal substance could secrete the normal amount of urine indistinguishable from healthy urine, Dr. Schuchardt sees a proof that the separation of urine is not a simple filtration, as Ludwig holds, but a secretion by a tissue, part of which can, in compensation, take on increased function. He points out also that the albumen appeared in the urine eight days before death, coincidently with an alteration in the nutrition, and, therefore, of the structure of the epithelium covering the glomeruli of the comparatively healthy part of the left kidney.

JAMES ANDERSON, M.D.

3. *Braun on the Origin of the Bothriocephalus Latus.*—Having succeeded in demonstrating the presence of scolices of the bothriocephalus in the muscles, the liver, and organs of generation of the pike and other animals, Braun (*St. Petersburg Med. Woch.*, No. 16, 1882) endeavoured to breed a tape-worm out of the healthy scolices in the intestine of a mammal, succeeding; beyond his hopes, in the case of cats and dogs, and proving conclusively that the worm found in their intestines, after appropriate feeding, differed in no particular from the bothriocephalus of man beyond being of a smaller calibre, corresponding to the altered situs. This, then, is a solution of the hitherto vexed question as to the origin of this parasite, the source from which it springs being the pike, as the source of the *tænia solium* is the pig, medium-sized pikes concealing forty or fifty of these worms, and larger ones more. In sixty pikes examined for them, there was only one in which traces of the bothriocephalus could not be found in the muscles.

Pereira on the Blood in Beriberi.—In addition to a notable diminution in beriberi of the red corpuscles and an increase in the white, Dr. Pereira, of Bahia (*Gaz. Med. da Bahia*; and *Gaz. Med. Italiana Lombardia* July 8th) has lately succeeded in demonstrating the existence of certain possibly specific micro-organisms. The general characteristics of

these minute bodies are that they are spherical, are endowed with a power of contraction and also of rotation round their own axes, and occur either singly or aggregated in masses. When cultivated artificially, according to Pasteur's method, they readily admit of indefinite propagation; but, if injected under the skin, they do not give rise to specific lesions, and are not multiplied in the blood. Micrococci essentially similar, but only to the extent of one or two per cent. of the persons examined, have also been found by Dr. Pereira in the blood of healthy, or apparently healthy, individuals. It is probable, therefore, that these minute organisms should be considered as not actually the specific cause of the condition known as beriberi, but rather as a sign of an altered condition of the blood, which thus becomes, in some as yet unexplained way, a suitable nidus for their development. It has been suggested that one result of the elevated temperature of the tropics may be to deprive the blood of a portion of its oxygen, and that this de-oxygenation, evidence of which Dr. Pereira finds in the fatty degeneration of certain viscera which is pathognomonic of beriberi, may render the blood less capable of resisting the tendency which all these minute organisms possess of indefinite multiplication. Once established in the blood, they induce a condition essentially akin to pernicious anæmia.

LITTON FORBES.

5. *Brose on Bright's Disease.*—Dr. Louis D. Brose (*Philadelphia Medical Times*, March 11, 1882), from some special studies, draws the following conclusions. 1. A nephritis may result whenever the blood going to the kidneys is surcharged with any irritating material that is excreted by them. 2. Fatty degeneration and infiltration are very early stages of nephritis—in fact, within twenty-four hours after its production. 3. The first alterations in the kidney are to be seen in the epithelium lining the convoluted uriniferous tubules; and this alteration manifests itself in a clouding of their protoplasm. 4. The intensity of the lesions is directly in proportion to the concentration of the poison. 5. There may be a parenchymatous nephritis, without an involvement perceptible by the microscope of the interstitial tissue; but this occurs very rarely, and only in those cases in which the poison acts either very severely and produces the early death of the animal, or its very great dilution by the blood and rapid excretion renders its influence transient, and the animal makes an early recovery. In many cases, there is an involvement of the interstitial tissue as well as of the epithelium, and cases are seen with all grades of these transitions. 6. Interstitial nephritis may occur as an acute disease, but in all cases of interstitial nephritis there is always detectable by the microscope more or less cloudiness of the epithelium; and, while this latter may return to its normal condition after the excretion of the irritant, the connective tissue, on the contrary, when once formed, cannot undergo reabsorption. However, the irritation exerts its influence at one time upon the interstitial tissue, and then the red granular kidney results; or at another time it acts most on the epithelium, when we have as a result the large white kidney. 7. The walls of the blood-vessels are thickened; and this alteration is due to a hypertrophy of all three coats, for the irritating matter affects not one coat alone, but all three alike. 8. Desquamation is due to an impermeability of the epithelium in consequence of its granular alterations, and thus the cells are forced away from their basement-membrane by a *vis a tergo*. 9. Parenchymatous nephritis is a very active process,

as is shown by the great cloudiness of the cells and the presence of highly granular and bloody cylinders in the urine; and the interstitial lesion is more of a passive process, resembling very much the results which we see following a passive congestion in any other part of the body.

6. *Litten on Narrowing of the Stream-Area in the Pulmonary Arteries.*—Dr. M. Litten (*Berl. Klin. Woch.*, 1882, No. 28) discusses the causes and consequences of stenosis of the pulmonary vessels, and the possibility of diagnosing them during life. Referring first to constriction of the orifice of the pulmonary artery, he points out the extreme rarity of the condition. Occurring generally at the level of the semilunar valves, it has been found by Vimont to be sometimes associated with patent foramen ovale. The patency is, however, probably secondary, and due to the increased tension in the right auricle. The main pulmonary vessel may be narrowed by external pressure or by internal occlusion. Of the former, aneurismal dilatation within the chest is the most common cause. Endarteritis, causing stenosis or thrombus, is very rare; and complete occlusion of the main trunk by embolism is equally so. The commonest seat of obstruction to the blood-supply is in the larger branches within the lung-tissue. Strangulation or twisting of a vessel may take place in this situation by contraction of cicatricial tissue; thrombus may form, but this is a rare occurrence; embolism may be caused, usually by detachment of clots from large systemic venous trunks, especially in cases of phlegmasia dolens, or of dilated cavities in the right side of the heart, or of acute endocarditis. In one hundred cases of thrombosis of various forms, some infarcts or emboli were discovered in the lungs in sixty-two instances. Carcinomatous material, especially from disease of the uterus or liver, may find its way into the lungs and set up embolism. By whatever agency produced, the effect on the lung-tissue is usually the same. In the records of some of these cases may be found a few instances of almost complete embolism of the parent trunk and of its branches, notwithstanding which, life has been prolonged for a considerable time. In most of such cases, however, death has been almost instantaneous. Occasionally it is possible clinically to diagnose an embolus, but of more importance is the recognition of the hæmorrhagic infarct. The recognisable features of pulmonary obstruction by embolism are, the sudden onset and production of a condition alternating between syncope and asphyxia, weak and rapid pulse, palpitation, congestion of veins, and possibly pulsation in the jugulars, orthopnoea, cyanosis, extreme anxiety and restlessness. The pupils are dilated, and the temperature lowered. Death takes place by cardiac failure. The physical signs in the lungs are those of diminished movement and respiration. The morbid heart-sound will vary with the position of the obstructing clot. Occasionally its position can be fixed, and the signs of obstruction noticed in the second intercostal space to the left of the sternum, both a bruit and a thrill being produced. A further basic bruit may be caused by dilatation of the vessel between the heart and the constricted spot. Sudden onset of the symptoms generally indicates embolism; a chronic development of them denotes gradual strangulation or thrombus. Venous pulsation and chronic hypertrophy of the right heart will also signify progressive mischief. With increased tension in the venous, there is diminished pressure in the arterial system. When complete obstruction of a

branch of the pulmonary artery takes place, there occurs at first a period of anæmia, closely followed by a condition of hyperæmia, and to this œdema succeeds. The volume of the lung is materially increased, and often some pleuritis is set up. The hyperæmia is explained as being due to the collateral blood-supply, which is greater than the venous out-flow, now deprived of its customary *vis à tergo*. The œdema is produced by the alteration in the tension in the arterial and venous vessels respectively, and from this arises a second condition, viz., unequal contraction of the ventricles of the heart. The greater volume of blood with which the right ventricle has to cope, disturbs its synchronous action with the left ventricle, which, in turn, is filled with so little arterial blood that its pulsations are often too weak to reach the peripheral vessels. In concluding his paper, Dr. Litten refers also to the danger of using inunction to the limb in cases of phlegmasia dolens. The œdema and fatty heart induced by carbonic acid poisoning are likewise touched upon.

E. CLIFFORD BEALE, M.B.

7. *Bassanovich on a Case of Polyorchismus*.—The author publishes (*Vratch*, 1882, No. 12) a case of this 'lusus naturæ', accidentally met by him in a Bulgarian peasant, aged 26, with chancre and gonorrhœa. The scrotum contained three testes, two of them lying in the left half of the organ. All three were normally developed, each of them having its own epididymis and spermatic cord. In the course of the gonorrhœa the patient had left epididymitis, which attacked only the lower of two testes. The patient stated that the upper left testis descended into the scrotum only when he was eight years old. [A still more curious case of polyorchismus has been lately published in the *New York Med. Record*, October 1881, by Dr. Cebeira, who found in a soldier four testes situated in two normally developed scrota.—*Rep.*]

V. IDELSON, M.D.

8. *Pekelharing on the Lesions in the Spinal Cord in Pseudo-hypertrophic Paralysis*.—Dr. Pekelharing (*Virchow's Archiv*, Band lxxxiv, Heft 2) relates the case of a child which had a large head, developed slowly, did not begin to speak till the third year, and in the following year became unsteady on its legs, and began to fall. The calves became thick and weak; the arms were subsequently similarly affected. He died at the age of 14 of pleurisy. The skull was thick; the lateral ventricles were distended with clear fluid. The muscles were undergoing simple atrophy, with great increase of fat. The nerve-bundles in the sciatic were separated by much fat. The spinal cord showed no naked-eye changes, except moderate hyperæmia of the grey substance in a part of the dorsal cord, about half an inch in length. The central canal was dilated in the cervical and dorsal regions, with accumulation of nuclei near it. In the lumbar region the canal was small, sometimes occluded. There was marked dilatation of the circumvascular spaces near the canal, and they frequently communicated with the anterior fissure. Throughout the whole cord, the anterior horns showed changes. The anterior and median parts were poor in ganglion-cells. The grey substance was also thicker than usual. The white substance and nerve-roots were normal. He thinks in this case the changes in the cord were secondary to the disappearance of the hydrorachis and hydrocephalus.

9. *Ribbert on Compensating Hypertrophy of the Kidney*.—Dr. Ribbert (*Virchow's Archiv*, Band lxxxviii, Heft 1) has endeavoured to discover the mode by which one kidney, after extirpation of its

fellow, increases in size. He concludes, as the result of his experiments, made on dogs and rabbits, that the compensatory hypertrophy in full-grown organs is principally due to increase in the bulk of the cortex, which consists of enlargement of the Malpighian bodies and convoluted tubes; but, in the growing organs of young animals, there is actual increase in number and size of the tubular and capsular epithelium, while the width of the capsules and tubules, both convoluted and straight, is increased.

10. *Aufrecht on the Pathogeny of Gastric Ulcer*.—Dr. Aufrecht (*Centrabl. für die Med. Wissen.*, 1882, No. 31) found, when injecting cantharidin to produce artificial nephritis, that the stomachs of some animals presented circular ulcers. On studying their mode of formation, he found, in the first instance, a circumscribed adenitis, which was followed by loss of substance and interstitial hæmorrhage.

11. *Birch-Hirschfeld on the Syphilis Bacillus*.—Dr. Birch-Hirschfeld (*Centrabl. für die Med. Wissen.*, No. 33, 1882) describes a bacillus which he has found free in colonies and in the interior of cells in gummata, condylomata, hard chancres, and syphilitic papules. The examination of the blood was negative in result.

12. *Brown-Séquard on the Hereditary Transmission of Artificially Produced Lesions*.—Dr. Brown-Séquard (*Comptes Rendus*, tome xciv, s. 627), many years ago, drew attention to the hereditary transmission of epilepsy in guinea-pigs, rendered epileptic by section of the sciatic nerve or cord, of alterations in the eye and ear after section of the cervical sympathetic, of ecchymosis and dry gangrene after destruction of the corpus restiforme, of exophthalmos after section of the spinal cord, and of loss of phalanges or digits after section of the sciatic nerve. He now adds a fresh series of changes in the eye, after section of the corpus restiforme, which causes in the parent atrophy of the globe, and in the descendants various opacities of the cornea, aqueous, lens or vitreous humour with atrophy of the globe in one case; also muscular atrophy after section of the sciatic. With the exception of the epileptic attacks, the changes in the descendants were often bilateral when they were unilateral in the parent, or *vice versa*, or the same side was not affected. Females transmitted the changes more readily than males. One generation often escaped. He has seen an abnormality transmitted to the sixth generation.

13. *Litten on a Mycotic Renal Disease*.—Dr. Max Litten (*Zeit. für Klin. Med.*, Band iv, sec. 191), relates two cases of sudden rigor, fever, and albuminuria, followed by uræmia and death, with suppression of urine, in which the kidneys were crowded with bacteria. Bamberger and Aufrecht have described similar cases.

14. *Leyden on Diabetic Phthisis*.—Dr. Leyden (*Zeit. für Klin. Med.*, Band iv, sec. 298) draws attention to the unfrequency of miliary tuberculosis, especially generalised tuberculosis, in diabetic phthisis, and to the small number of giant-cells, and the extensive obliterative endarteritis which are present.

R. SAUNDBY, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BECKWITH, F. E.—Laparo-Elytrotomy. (Proceedings of the Connecticut Medical Society, 1882.)

2. BROWNE, BERNARD B.—On the use of the Curette

as a Therapeutic agent in Gynæcological Practice. (*The Obstetric Gaz.*, Sept. 1882, Cincinnati.)

3. BUNGE, O.—Contribution to Massage of the Abdomen, and especially the Uterus and its Annexes. (*Berl. Klin. Woch.*, 19th June 1882.)

4. GUSSEROW.—Puerperal Fever. (*Berl. Klin. Woch.*, 1882, No. 32)

5. HARMAN, G. A.—How to prevent Laceration of the Perinæum. (*Ohio Med. Journ.*, June 1882.)

6. MANGIAGALLI, LUIGI.—Rendiconto clinico della clinica ostetrica di Milano. (P. Agnelli. Milano, 1882.)

7. MARCHIONNESCHI, O.—On Presentation of the Abdomen. (*Annali di Ostetr., Ginecol., e Pediatria*, September 1882.)

8. MONTAZ, L.—Contribution to the History of Contracted Pelves from Double Congenital Dislocation of the Ilio-femoral Joint. (*Lyon Méd.*, September 10th, 1882.)

9. POLK, W. M.—Landmarks in the Operation of Laparo-Elytrotomy. (*New York Med. Journ. and Obstet. Rev.*, May 1882.)

10. RICHARDIÈRE, H.—Metrorrhagia caused by intense Ovarian Congestion. (*Ann. de Gyné.*, October 1882.)

11. SIMPSON, A. R.—On the Uterine Sound. (*Edin. Med. Journ.*, August 1882.)

12. WINCKEL, F.—Clinical observations on Dystocia from Contracted Pelvis. (*Centralbl. für Gynäkol.*, 21 October 1882.)

13. WOLCZYNSKI.—A case of Neglected Arm-Presentation, in which it was stated that the patient had pulled off the prolapsed arm. (*Centralbl. für Gynäkol.*, 28 October 1882)

1. *Beckwith on Laparo-Elytrotomy.*—The operation of laparo-elytrotomy has now been performed eight times. The operators were Thomas, Skene, Gillette, Hime, and Edis. Four mothers and six children have survived. In four of the cases, however, the mothers were in a hopeless condition when the operation was undertaken in the interest of the children, three of whom were thus saved. Dr. Beckwith believes that, with conjugate narrowing below two and an half inches, Thomas' operation is safer for the mother than craniotomy. Its wonderful lack of mortality, he says, is not in any way, as far as he can judge, due to the merit of the operators, but to that of the operation itself. Hence, it undoubtedly has a great future before it.

6. *Mangiagalli on the Mortality in the Milan Lying-in Hospital.*—It appears that the antiseptic system, which is now used, has brought the mortality, in the puerperal state, from 6 per cent. to 4.66 per cent. [This will not compare with the results at the Paris Maternity, which give 2 per cent.; nor with those at the British Lying-in Hospital, where the mortality, since the introduction of antiseptic precautions has been at the rate of 1 death in 120 deliveries.—*Rep.*]

7. *Marchionneschi on Presentation of the Abdomen.*—Dr. Ottaviano Marchionneschi relates three cases of presentation of the abdomen recorded by other observers, and adds a fourth seen by himself and Professor Minati. He discusses the arguments for and against the belief in the possibility of this presentation, by Solayres, Baudelocque, Gardien, Maygrier, and Capuron. The case seen by Dr. Marchionneschi was that of a woman in labour with her ninth child, whose previous labours had been normal. The pelvis was normal, pregnancy at term, the waters had run off some time; the patient had been in labour twenty-four hours. The shape of the uterus was unusual, being more ample than usual at the sides. The fœtus was living. On examination, Dr. Marchionneschi

found the centre of the pelvis occupied by the superior and inferior limbs of the child. He at once recognised the case as an important one, and sent for Professor Minati, who arrived immediately. 'I always remember', says Dr. Marchionneschi, 'the original and appropriate words in which Dr. Minati made known to me the result of his examination. "Sento qua, ei mi disse, tanta gente a conversazione; e subito dopo potè soggiungere: lo credo un bellissimo caso di presentazione addominale." The dorsum was lying upwards, the abdomen underneath, masked by the agglomerated upper and lower extremities. The fœtus did not descend. The contractions of the uterus were sufficiently frequent but not powerful. Dr. Marchionneschi reached down a leg, when he found that the umbilical cord had become so tightly twisted round it that he could with difficulty pass a small pair of scissors between it and the thigh to divide it before bringing down the other leg. The rest of the child followed easily. The fœtus was a living female at term, healthy and well-shaped. The puerperium proceeded normally. Dr. Marchionneschi states that Professor Balocchi had met one case of abdominal presentation, which he always alluded to in his lectures, at the same time remarking that he had always believed the presentation impossible until he saw it.

'Cacciarli il ciel per esser men belli
Nè lo profondo inferno li riceve,
Che troppa gloria i rei avrebber d'elli.'

8. *Montaz on Contracted Pelvis.*—The case was that of a primipara, aged 35, admitted into the Lyons Maternity at the beginning of May 1881. Labour set in on the 3rd June, when Dr. Montaz was called to examine the patient, and found that there was double congenital dislocation of both hips, the great trochanters being at least two centimètres above the level of Nélaton's line. The pelvis was anteverted; there was marked lordosis, and lameness, but no trace of rickets, either in the limbs or trunk. Vaginal examination revealed the head presenting at the pelvic brim in the transverse diameter. The waters were broken; the os uteri was dilated. Posteriorly, the sacral promontory was easily felt, the conjugate diameter being contracted. The forceps was applied and the head delivered, indented over the left parietal bone by the projecting promontory. The placenta was expressed. Death occurred on the third day from septicæmia. The pelvis, which was removed, was dried and prepared. The new arthroses were behind and above the cotyloid cavities, in the external iliac fossæ. The necks of the femora were shortened. The pelvis was asymmetrical, the promontory of the sacrum being displaced one centimètre from the median line towards the left. The iliac fossæ were very concave. The lumbar column was in a condition of lordosis, but the predominating lesion in the pelvis was the transverse elongation of the brim at the expense of the antero-posterior diameter. In the cavity of the pelvis, and at the inferior strait, the same elongation of the transverse diameters and the same diminution of the conjugate diameters were seen. The ischia were widely separated, the ascending rami of the pubes considerably elongated, and the pubic arch widely distended. The depth of the pelvic cavity was considerably diminished. The coccyx was markedly inclined forwards. Dr. Montaz is of opinion that the deformity in the pelvis was caused by the dislocation of the femora. The normal lateral pressure of the femora was removed. The sacral promontory was slowly pushed forwards, and the lateral

distension was no longer controlled by the pressure of the femora.

9. *Polk on Landmarks in Laparo-Elytrotomy.*—Dr. Polk recently demonstrated certain anatomical points bearing upon the operation of laparo-elytrotomy, before the New York Obstetrical Society. The specimen shown, taken from the body of a woman who had been murdered in the seventh month of pregnancy, was a section showing the relations of the pelvic contents during the latter part of gestation, and especially the course of the ureter. Practising the operation upon this and other cadavers, the author has found that the ureters do not follow the pelvic wall to a point near the ischial spine, as in the non-pregnant condition, but that, crossing the pelvic brim at the common iliac bifurcation, the left just behind, the right just in front of that point, they descend into the canal to the brim of the bony pelvis, the point being about the synchondrosis. In this course they accompany the internal iliac artery, the right in front of the vessel, the left crossing it obliquely. Reaching the bony brim (the ilio-pectineal line), they leave the pelvic wall, emerging from beneath the base of the broad ligaments (in pregnancy about on a level with the pelvic brim, and carried back on a line with the synchondrosis), and take a course downward, forward, and somewhat inward, passing about midway between the pelvic wall and the cervico-vaginal junction, but approaching very closely the antero-lateral wall of the vagina, as they turn more decidedly inward, on a lower plane, to strike the base of the bladder three quarters of an inch below the cervix, terminating in the bladder at a point (the subject being on the back) just two inches below the spine of the pubes. A line drawn from the spine of the pubes corresponds in the main to the line of the ureters. Along this line they have the following relations to the pelvic brim (in the recent state): at the bifurcation, half an inch below; at the extremities of the transverse diameter of the pelvis, about an inch; and at the spine of the pubes two inches below. As a whole, the tubes in the pelvis are situated upon a higher plane than in the non-pregnant condition, having been carried slightly upwards while being separated from their close relation with the pelvic wall by the ascending uterus. How far they may be elevated in a case of extreme pelvic deformity with a pendulous abdomen, and the uterus correspondingly displaced, Dr. Polk is unable to say, but he thinks it probable that the bladder being empty, and not dragged upward, thus preserving the normal position of the vesical end of the tubes, the displacement would not be such as to bring any part of them above the points indicated. Another matter which Dr. Polk took occasion to investigate was the ground of the objection to operating upon the left side. In view of the strong probability that the operation can be done on the same side but once, this, he remarks, is a very important question. He did the operation upon the left side, the vessels being injected with plaster and the rectum distended. He found that the rectum offered no such obstacle as is commonly supposed, and that the operation was as feasible upon one side as upon the other. After the operation, the organ was carefully examined and found in no way disturbed. In looking at its position this was readily accounted for; it lies behind the broad ligament. In entering and leaving the pelvic canal, we cross the brim between the base of the broad ligament and the posterior surface of the bladder. This latter is about on a line with the ilio-pectineal eminence, while the

former is as far back as the synchondrosis. Here is ample space for manipulation and extraction. The important structures that Dr. Polk regards as most likely to suffer are the vessels going to the uterus through the broad ligament. These, by being stretched and dragged upon in extraction, might be torn, if the sides of the incision were not carefully supported in cases requiring a powerful traction.

FANCOURT BARNES, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. WIDERHOFER.—The Feeding of Infants. (*Wiener Allgem. Med. Zeit.*, Nos. 27 and 28, 1882.)
2. CHEADLE.—Osteal or Periosteal Cachexia and Scurvy. (*Lancet*, July 1882, p. 48.)
3. WEST.—Strumous Ulceration of the Intestines. (*Lancet*, Sept., p. 522.)
4. HENOCH.—A Base of Tubercular Pericarditis and Peritonitis. (*Verhandl. der Berl. Med. Gesellsch.*, Band xii.)
5. FÜRST.—Acute Rickets. (*Jahrb. für Kinderheilk.*, Band xviii.)
6. LANGMAID.—Intussusception, with Recovery (*Boston Med. and Surg. Journ.*)
7. HERZOG.—Case of Morbilli Scarlatina. (*Berl. Klin. Woch.*, 1882, No. 7.)

1. *Widerhofer on the Dieting of Infants.*—Professor Widerhofer of Vienna (*Wien. Allgem. Med. Zeit.*, Nos. 27, 28, 1882) has recently discussed the subject of infant dietetics, laying down clearly the indications which justify the feeding of babies by other than the natural means. Children of feeble vitality are frequently unable to suck, and require artificial feeding. By means of the scales, we may get a fair indication of the degree of vital strength, by assuming the average weight of a healthy child at birth to average 3 kilogrammes. Any less weight would then indicate weakness, whilst any child of less weight than 2 kilogrammes would be classed as one of feeble vitality. With this diminished weight, there are usually definite symptoms of feebleness to be found. Irregular cardiac action, shallow breathing, and depressed temperature are often present, and must be treated with especial care. At first, the mother's milk should be given either with the spoon to the mouth, or by means of injection through the nose, by which the movements of swallowing are more easily excited. These cases are frequently lost from very trifling ailments, especially from slight bronchial catarrh. Children who are able to suck may be fed (1) by the mother's milk, (2) by that of a nurse, or (3) by artificial means, either entirely or in addition to breast milk. Of these, the mother's milk is to be preferred, even if imperfect, to the most perfect of wet-nurses. Various causes, however, may interfere with the function in the mother; malformed nipples or imperfect secretion of milk, constitutional disease, as tubercle, epilepsy, etc., or previous inability to rear children. A breast in proper condition for suckling should have veins distinctly visible, an easily erectile nipple, and should discharge from seven or eight points. Breasts which ooze spontaneously are never good, producing but little milk, which lasts but a short time. The best guide to the choice of a nurse is the state of health of her own child. Especially, the state of the bowels and its digestive powers should be regarded. The period of weaning cannot be fixed as a hard and fast rule. Generally speaking, after the nurse has men-

struated once or twice, the milk becomes altered, and disagrees. If this occur early, it is sometimes advisable to provide another nurse for a period, before commencing to wean. No special diet is necessary for a wet-nurse, but abundant fluids should be taken; her weight should not fluctuate during suckling. The indications for weaning given by the child itself are usually the outcrop of the teeth and the amount of salivary secretion. The time of year, however, is also of importance, since the quality of cows' milk of necessity varies with the season. In March and April it is generally at its worst. Weaning should be avoided at times when diseases of digestive organs are most common, as, for instance, in July and August. Artificial feeding may be complete, or may interchange with breast-feeding. The latter is of necessity most in vogue with the poorer classes. Of all milks, mares' milk comes nearest to human milk in composition. Then follow asses', cows', and goats' milk. Imperfect digestion of milk must be met by varying the source of the milk, or by making various additions to it. Carrot-meal, stale bread-crumbs, arrowroot, soda, or salt, are often of service. The familiar device of rendering cows' milk available for children by the addition of water and sugar, may be made more complete by the further addition of a small quantity of cream, which renders the subsequent transition to undiluted milk more easy. In all cases, the cows' milk should be boiled before use. Condensed milk is valuable on a long journey, especially by sea, but in such cases children should be trained to its use for a short time before starting. 'The numerous foods for infants,' concludes Professor Widerhofer, 'though much be puffed, are of no value whatever.'

E. CLIFFORD BEALE, M.B.

2. *Cheadle on Osteal and Periosteal Cachexia and Scurvy.*—In the *Lancet* of July 1882, p. 48, Dr. Cheadle points out the occasional superposition of symptoms of scurvy on a rachitic constitution. A child ten months old was suffering from the usual signs of rickets, with the following symptoms super-added: extreme cachexia, muscular debility, periosteal swellings, oedema of the legs, albuminuria, and hæmorrhagic spongy gums. This condition always results from errors in diet. In this case, the child, when seven months old, was fed on arrowroot and isinglass for a month, and on Nestle's food for the three months immediately preceding treatment, milk being totally excluded. The treatment was simple antiscorbutic diet, without any medicine. This was followed by an almost immediate improvement of all the symptoms. Dr. Cheadle forms the conclusion from this case, amongst others, and a similar one reported by Dr. Gee, that, if Nestle's food were not the prime cause of the scorbutic condition, it was clearly powerless to remove it, and that this preparation alone is inadequate to supply the full elements of nutrition.

R. NEALE, M.D.

3. *West on Strumous Ulceration of the Intestines.*—Mr. Samuel West, in the *Lancet* for September, p. 522, records a most interesting case of a child, aged 9, who had been ailing for a fortnight, suffering from pain and sickness after food, and slight diarrhoea. The child had some fever, was listless and heavy, and slept much; the abdomen was retracted. There were dulness on percussion at the right apex, increase of respiratory signs, and fine crepitation. The diagnosis was acute general tuberculosis. The case followed the usual course observed in this disease; there being irregular movements of the eyeballs, dilated pupils, twitchings of the hands and feet, in-

voluntary passage of motions and urine, and finally death. The *post mortem* examination showed the diagnosis to be completely wrong. There was no recent mischief in the apex of the right lung. The brain was absolutely healthy, except for the presence of a small firm fibrous cyst. All the other organs were healthy, except the intestines, which were in an advanced state of strumous ulceration. The uncertainty of diagnosis between many cases of acute general tuberculosis and typhoid fever is generally recognised; but this case is an instance of an intestinal lesion, not typhoid, which presented the same difficulties.

R. NEALE, M.D.

4. *Henoch on a Case of Tubercular Pericarditis and Peritonitis.*—The interest of this case, detailed by Dr. Henoch (*Verhandlungen der Berl. Med. Gesellsch.*, Band xii, p. 69), lies mainly in the clinical history. A boy, aged 8 years, was treated for severe pericarditis arising from no ascertainable cause. He recovered perfectly, so far as physical signs could prove that fact: inspection, palpation, percussion, and auscultation giving absolutely normal results. Two months after his discharge from the clinic he was readmitted for quite another complaint, viz., enormous ascites. The liver seemed enlarged—a fact confirmed when the fluid was on two occasions removed by puncture. There was no albumen in the urine, and no general oedema. Not a single painful point could at any time be discovered in the abdomen, and the heart, which was carefully examined, seemed perfectly normal. After this the fluid gathered again, and now it began to drain away from the umbilicus, which was perforated like a sieve, till the ascites was very much diminished. Seven months later, the boy died with the usual marked symptoms of tubercular meningitis. The *post mortem* examination showed complete adhesion between the heart and pericardium, both the pericardium and left pleura being closely studded with miliary tubercles. There was no fluid in either pleura. On the liver and in the mesentery were bean-sized tubercles. The omentum was over an inch thick, chiefly formed by pea-sized tubercles. The liver was enlarged and fatty. There was marked tubercular meningitis. The lungs were perfectly free from tubercle. Dr. Henoch emphasises the absence of any symptom of the pericardial adhesion. The pericarditis he believes to have been propagated from the pleura. He has found chronic tubercular peritonitis in children generally absolutely painless, although he admits that in certain cases they complain of pain if firm pressure be made. He has never seen the fluid make its way through the umbilicus, although he has frequently seen chronic peritoneal abscesses open there. Treatment is useless, but, as the affection may, he believes, be non-tubercular, he uses iodine alternately over each quarter of the abdomen.

5. *Fürst on Acute Rickets.*—The case is described by Dr. Fürst in the *Jahrb. für Kinderh.*, Band xviii, p. 192. The patient, an infant, aged 2 years and 1 month, had been fed largely on starch-food, and suffered at the age of 6 months from sweating and dyspeptic symptoms. Teething commenced in the thirteenth month, and walking was learnt several months later. Spasmodic croup, and swelling of the epiphyses, appeared at that time. At the above-mentioned age, the child suddenly fell ill with acute febrile symptoms. Besides the above rachitic symptoms, there were also open anterior fontanelle, cranio-tabes, and rachitic alterations in the thorax. The upper extremities were free from pain, and not swollen; but the

left femur and both tibiæ showed a diffuse cylindrical swelling, with red, tight, and glancing skin, presenting the appearance of a diffuse cellular infiltration proceeding from the periosteum, or an osteomyelitis. Calomel was given internally, and iodine and cold applied locally. After a few days the right forearm was affected; then the right arm and the left forearm were affected, while the parts first attacked began to recover, the fever also abating. Within four weeks the child was free from fever and pain, but there remained swelling of the epiphyses and deformities of various bones not previously present. Four weeks later there was a slight recurrence of the attack, leaving a curve in the right femur. Dr. Fürst would term such an attack as this, not acute rickets, but the acute initial stage of rickets, differing from the usual symptoms only in the acuteness of the attack.

J. ANDERSON, M.D.

6. *Langmaid on Intussusception, with Recovery.*—In the *Boston Med. and Surg. Jour.*, Dr. S. W. Langmaid reports the following interesting case. On March 10th he was called to a female child, five months old, who was the subject of the above accident. The infant had always been well, and had not been particularly constipated. She had been well until the night of March 7th, when she was restless, desiring to nurse often, but rejecting the nipple immediately. The next day she vomited, and cried out at intervals, as if from severe pain. At noon she began to have bloody discharges. The pain and bloody discharges continued until he saw her. She appeared stupid. The pulse was 120. The abdomen was not distended, or tender to pressure. The finger, inserted its whole length in the rectum, encountered a tumour, with a central indentation, reminding one of the neck of the uterus. Dr. Sumner saw her with him two hours later. A cylindrical tumour existed in the region of the descending colon. The invaginated intestine had come down to the anus, and, when the child was held in the inverted position, was seen to be of a chocolate colour. The duration of the lesion, forty-eight to sixty hours, and the appearance of the bowel, contra-indicated mechanical interference. The condition of the child remained the same, except that the discharges of blood became less frequent and smaller, until the night of March 12th, when the patient became brighter, nursed, and retained the food. Next day there were two natural dejections; the tumour had disappeared, and the child was well. Commenting on this case, Dr. Whitney says that in the palliative treatment of intussusception a spontaneous cure is observed in 50 per cent. of the cases. It seems to him that the prognosis must depend very much upon the situation of the intussusception. If it occur in the small intestines, and especially if the ileo-cæcal valve be invaginated, the chances of spontaneous cure will be less than when the descending colon is the region involved.

7. *Herzog on a Case of Morbilli-Scarlatina.*—J. Herzog (*Berl. Klin. Woch.*, 1882, No. 7) relates the case of a boy, aged 8, who was attacked with measles, accompanied by slight catarrhal symptoms in the air-passages and conjunctivæ. On the fourth day, as the temperature was returning to the normal, it rose again suddenly, with swelling of the spleen, sore-throat, and a scarlatinal rash, with miliaria. On the sixth day there was branny desquamation of the face, neck, and chest; but at the same time the scarlatinal rash extended; there were, finally, stomatitis and lamellar desquamation, which lasted longer than the branny desquamation. The patient made a good recovery.

R. SAUNDBY, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1. PITRES.—The Muscular Force in Hemiplegia. (*Arch. de Neurol.*, No. 10.)
2. MARIE.—The State of the Pupils in Epileptics. (*Ibid.*)
3. VULPIAN.—Epileptic Phenomena in Tabes. (*Revue de Méd.*, 1882, No. 2.)
4. SCHUTZ.—Athetosis. (*Prager Med. Woch.*, 1882, Nos. 3 and 4.)
5. WESTPHAL.—The Disappearance and the Localisation of the Knee-Reflex. (*Verhandl. der Berl. Med. Gesellschaft.*, Band xii.)
6. GREIDENBERG, B. C.—Hemichorea after Lightning-Stroke; Cured by Galvanisation. (*Vratch.*, 1882, No. 10, pp. 155-6; and No. 11, pp. 171-4.)

1. *Pitres on the Muscular Force in Hemiplegia.*—M. Pitres begins his paper (*Arch. de Neurol.*, No. 10) by remarking that cerebral lesions do not entail merely hemiplegic weakness, but that a certain degree of feebleness attaches also to the extremities on the side corresponding to the lesion. In short, there exists direct as well as crossed paralysis in all cases of hemiplegia. Sometimes, as Brown-Séquard has shown, an unilateral cerebral lesion determines paralysis of both lower extremities, and of the upper extremity on the side opposite the lesion, or of both lower limbs only. Pitres, however, observes that there is a difference, which must be taken into account, between muscular feebleness and true paralysis. His conclusions are as follows. 1. In cerebral hemiplegia, the extremities on the side opposite to the hemiplegia are always weaker than in the normal state. 2. In right hemiplegia, the extremities on the left side are relatively less enfeebled than the extremities on the right side in left hemiplegia. 3. As a rule, the loss of power on the side opposite to the hemiplegia is proportionately greater in the lower than in the corresponding upper extremity. 4. The paresis on the side opposite to the hemiplegia is the more marked as the hemiplegia is recent. 5. The muscular feebleness on the side opposite to the hemiplegia is not generally accompanied by any appreciable inability to execute voluntary movements. Speaking of the muscular force possessed by the paralysed extremities in hemiplegia, M. Pitres observes that the pressure of the paralysed hand on the dynamometer registers a much less degree of strength when the non-paralysed hand remains open. When the latter is firmly closed, the paralysed hand will exert an increased pressure of three or four kilogrammes. It appears, then, that the phenomenon of association has a great influence on the determination of the muscular force in hemiplegic patients. M. Pitres lays down another proposition, to the effect that the pressure-force, as measured by the dynamometer, does not give the exact degree of functional importance of the paralysed extremities in cerebral hemiplegia. Indeed, both hands may appear equally strong if reliance be placed on the dynamometer alone; but it will be found that the paralysed extremity is incapable of executing certain finer movements, such as the act of bringing a glass to the mouth. It may be said briefly, that functional impotence does not bear a direct and necessary relation to muscular weakness. The essential element in cerebral paralysis is absolute or relative loss of voluntary motility.

2. *Marie on the State of the Pupils in Epileptics.*—At the suggestion of M. Charcot, the author undertook the investigation of the pupils of the epileptics at La Salpêtrière, both during and between the attacks (*Arch. de Neurol.*, No. 10). The object was to ascertain the accuracy of the assertions put forward by Dr. Carter Gray in the *Amer. Jour. of Med. Science*, Oct. 1880. This author maintains that the pupils between epileptic attacks are always more or less dilated, and that they undergo more rapid variations in size than those of healthy people. M. Marie examined fifty-three epileptics, but was unable to confirm Dr. Gray's assertion. The author, however, found marked inequality of pupils in eight cases, but refrains from attempting any explanation of the fact.

W. B. HADDEN, M.D.

3. *Vulpian on Epileptic Phenomena in Tabes.*—Vulpian (*Rev. de Méd.*, 1882, No. 2) relates the case of a man, aged 28, who, in the course of a few months, had repeated attacks of loss of consciousness, with, on one occasion, right-sided facial paralysis with aphasia, and, a month later, right-sided hemiplegia and aphasia, with feeling of laryngeal constriction. All these symptoms disappeared later on, and decided tabes made its appearance. He had marked gastric and laryngeal crises, also contraction of the lower extremities, and tremulous movements, as if the lateral columns were involved. There were no knee or foot phenomena. Later, special groups of muscles, especially the abductors of the thighs, became weak, but were improved by faradisation. Then the knee-joint swelled and filled with fluid; later on, the affected joints crepitated. The question of the rheumatic or specific nature of this joint-affection is discussed. The patient benefited greatly by bromide of uranium in doses of 1 to 4 milligrammes (1-60th to 1-15th grain) daily, especially in respect to pain. Two other cases obtained no benefit from the same drug.

4. *Schutz on Athetosis.*—Schutz (*Prager Med. Woch.*, 1882, Nos. 3 and 4) relates a case of athetosis of the fingers in a man whose right extremities had become gradually paralysed. At the necropsy, he found softening of the left optic thalamus and also of the head of the caudate nucleus. The internal capsule was involved, especially at the junction of the middle and anterior thirds. The posterior part was intact. In a second case, there were general convulsions, followed by feebleness of the left half of the body. Later on, there were involuntary spasmodic movements of the hand and foot. He ultimately recovered. Schutz thinks that in this case there was an inflammatory focus in the right hemisphere, which, perhaps, involved the same parts as in the first case.

5. *Westphal on the Disappearance and the Localisation of the Knee-Reflex.*—Dr. Westphal gives, in the *Verhandl. der Berl. Med. Gesellsch.*, Band xii, p. 47, a very interesting paper on this subject. The paper is too closely reasoned to be abstracted, but the main questions which are intended to be settled by the case which he gives, are (1) in cases where the loss of the knee-reflex is the first symptom of tabes, is there already anatomical change in the lumbar posterior columns, and (2), if so, where; that is, in the postero-external column or in the postero-median column? As Dr. Westphal points out, an answer to these questions need not be looked for in cases of advanced tabes, where the sclerosis has extended widely beyond its first limits before it causes death. The case detailed by him, however, showed the disease confined to the postero-external

column, and in other respects seems to answer as an *experimentum crucis* to prove that the lesion in tabes which causes the disappearance of this reflex, is in the postero-lateral column or root-zone of Charcot. Professor Westphal considers that the knee-reflex ought to be tried in all cases of obscure nervous symptoms, e.g., in hypochondria, as he believes it is frequently, by a long time, the first symptoms of tabes; and if he find it absent, without other symptoms of tabes being present, he takes it as a sign of latent tabes, which may, and most probably will, be developed at a future time. The reflex is difficult to produce in those who have short, thick legs, and those who have short patellar tendons, but Dr. Westphal says he has never seen it absent in an undoubtedly healthy individual. JAMES ANDERSON, M.D.

6. *Greidenberg on Hemichorea after Lightning-stroke.*—The author records (*Vratch*, 1882, Nos. 10 and 11) an interesting case where a telegraph clerk—a woman, aged 38—was struck by lightning on her left hand when she was engaged in closing the circuit during a thunderstorm. Having recovered from the shock, the patient found a small burnt spot on her left little finger, but felt no pain. Within a fortnight after the accident, constant movements in her fingers developed, which some months later spread over the whole upper limb, and, still later, over the whole left half of the body. Dr. Greidenberg, who saw the patient eight months after the accident, recognised a typical case of hemichorea, the movements being most intense in the upper limb, which was considerably wasted, and showed considerable loss of muscular power. The treatment consisted of daily galvanisation, one pole being applied first to the spine, afterwards to the median nerve; another to the left brachial plexus. After five sittings of ten minutes' duration, and with the current from twenty elements, there began a decided improvement, which proceeded without interruption. After fourteen sittings the movements continued in the fingers only, and very soon the patient recovered so far as to be able to work with both hands, to embroider, etc. About three months later she returned to her professional occupation. The only traces left of the hemichorea were extremely slight motions in the fingers, controlled by the patient's voluntary efforts; slight tremor of the limb when raised; and, lastly, the burnt spot on the little finger, which had not healed, though more than a year had elapsed. V. IDELSON, M.D.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. GAUTIER and ETARD.—The Mechanism of Putrefaction, and the Alkaloids resulting therefrom. (*Comptes Rend.*, tome xciv, p. 1357; *Gaz. Méd. de Paris*, 1882, No. 27, p. 337.)
2. BÉCHAMP.—Ptomaines (*Comptes Rend.*, tome xciv, p. 973.)
3. WORMLEY.—Gelsemium. (*Pharm. Journ.* [3], Vol. xiii, p. 106.)
4. SCHWARZ.—Gelsemium. (*Pharm. Journ.* [3], Vol. xiii, p. 148.)
5. PECHOLIER.—Poisoning by Apomorphia. (*Ann. d'Hyg.*, 1882, tome ii, p. 185.)
6. Poisoning by Male Fern. (*The Weekly Ceylon Observer*, Aug. 26th, 1882.)
7. BULLARD.—Dialysed Iron in the Treatment of Arsenical Poisoning. (*Philadelphia Rep.*)

8. GRIFFIN.—Arsenic. (*New Remedies*, Aug. 1882 p. 247.)

9. NAYLOR and BRAITHWAITE.—The Detection of Arsenic. (*Pharm. Journ.* [3], Vol. xiii, p. 228.)

10. HÜBNER.—Morphia. (*Pharm. Zeitung*, No. 34, 1882; *New Remedies*, Aug. 1882, p. 248.)

11. SCHMIEDEL.—Poisoning by Binoxalate of Potash. (*Friedreich's Blätt. für Gerichtl. Med.*, 1882, p. 121.)

12. DANILLO, S.—On the Physiological Pathology of the Cerebral Cortex in Poisoning by Large Doses of Alcohol and Essence of Absinthe. (*Vratch*, 1882, No. 10.)

13. EMMERT.—Wounds of the Aorta. (*Friedreich's Blätt. für Gerichtl. Med.*, 1882, p. 160.)

14. Post Mortem Injuries from Insects. (*Pharm. Zeitung*, No. 102, 1881.)

1. *Gautier and Etard on the Mechanism of Putrefaction and the Alkaloids Resulting therefrom.*—Gautier and Etard (*Compt. Rend.*, p. 1357; *Gaz. Méd. de Paris*, 1882, No. 27, p. 337) have investigated the process of putrefaction, which they find to be essentially one of hydration and liberation of ammonia. They describe several alkaloids which they obtained from putrid matters, and analysed. The analytical figures are, however, in the language of the authors, not very satisfactory.

2. *Béchamp on Ptomaines.*—Béchamp (*Ibid.*, p. 973) describes investigations which show that certain normal products of the organism and of the digestion of albuminoid bodies contain substances which have the character of ptomaines, and, in the chemical reactions, closely resembled certain poisonous alkaloids. These substances are, however, harmless in their effects upon frogs.

3. *Wormley and Schwarz on Gelsemium.*—Dr. Wormley (*Pharm. Journ.* [3], vol. viii, p. 106) has investigated the chief constituents of gelsemium, viz., gelsemine and gelseminic acid; and Dr. E. Schwarz (*Ibid.*, p. 148) also writes on the same subject. Wormley asserts that gelseminic acid is not identical with æsculin, whilst Schwarz asserts their identity, and finds that æsculin is not poisonous to animals. Both observers give valuable information as to the best means of detecting gelsemine in forensic practice.

5. *Pécholier on Poisoning by Apomorphia.*—Dr. Pécholier describes his own case of poisoning by an overdose of apomorphia (*Ann. d'Hygiène*, 1882, tome ii, p. 185). Whilst suffering from rheumatic pains when in a depressed state of health, for which sodium salicylate and morphia afforded inadequate relief, he injected into himself hypodermically, one-fifth of a grain of apomorphia. In two minutes he had intense nausea, without vomiting: respiration ceased, and was then resumed with great irregularity. The administration of a second dose of apomorphia, subcutaneously, induced vomiting, followed by renewed collapse, which lasted over half-an-hour, with unfrequent and stertorous breathing, and feeble irregular pulse. Under the use of sinapisms and the subcutaneous injection of ether, recovery rapidly ensued.

6. *Poisoning by Male Fern.*—A case is reported (*The Weekly Ceylon Observer*, Aug. 26, 1882) of death, apparently as the result of the administration of two successive doses, each consisting of six drachms of ethereal extract of male fern and a drachm and a half of powder of kamala. The symptoms were those of an irritant poison, with depression and intense collapse.

7. *Bullard on Dialysed Iron in the Treatment of Arsenical Poisoning.*—Dr. Bullard (*Philadelphia Reporter*) speaks most highly of the use of dialysed

iron as an antidote to the inhalation of arsenical fumes in the smelting of metals. He mentions some striking cases, and states that he has treated two hundred cases of arsenical poisoning with dialysed iron, and all have been cured.

8. *Griffin on Arsenic.*—Dr. O. T. Griffin (*New Remedies*, Aug. 1882, p. 247) has investigated the delicacy of Fleitmann's reaction for arsenic (generation of nascent hydrogen by the action of soda upon zinc), and finds that the test is not one of great delicacy, since it failed when one-sixth of a milligramme of arsenous acid (1-400th grain) was operated upon in a cubic centimètre (16 minims) of water.

9. *Naylor and Braithwaite on the Detection and Estimation of Arsenic.*—Messrs. Naylor and Braithwaite (*Pharm. Jour.* [3], vol. xiii, p. 228) controvert by their experiments the statement of Patrouillard, that arsenic is reduced to the state of arsenious acid when heated in solution with oxalic acid. They also describe a method for the quantitative estimation of arsenic, based upon the reduction of metallic mercury from mercuric chloride by means of arsenious oxide.

10. *Hübner on Morphia.*—Dr. R. Hübner (*Pharm. Zeitung*, No. 34; *New Remedies*, Aug. 1882, p. 248) has investigated the tests for this alkaloid, and gives the following hints as to their application. 1. The red colour caused by nitric acid is best seen by observing the single solid particles brought into contact with the acid. The liquid should not be stirred. 2. The nitro-sulphuric acid reaction is most sharply brought out if 15 to 20 drops of sulphuric acid be poured upon the alkaloid, the mixture warmed until the acid begins to volatilise, then cooled, and one drop of dilute nitric acid (1 in 20) be allowed to flow from the edge of the capsule, which is then to be cautiously agitated. 3. The ferric chloride should be the ordinary solution, diluted with forty times its bulk of water; and it should be added, drop by drop, till a maximum of blueness is obtained. 4. Fröhde's test is best applied by placing the substance to be tested and the reagent (sulpho-molybdic acid) separately on a watch-glass resting on a white surface, bringing them gradually into contact, and watching the effect through a lens.

11. *Schmiedel on Poisoning by Binoxalate of Potash.*—A fatal case of poisoning by this substance is recorded by Dr. Schmiedel (*Friedreich's Blätter für Gerichtl. Med.*, 1882, p. 121). The symptoms were but little observed, except that the patient, a young woman, vomited freely; and she must have died speedily. The visceral appearances were these. The abdominal organs generally had a rose-red appearance. The stomach was of a grey colour, and the veins, gorged with dark blood, appeared like cords upon the surface. Its mucous surface was of blackish hue. Nearly half an ounce of the poison was found in the stomach-contents. The œsophagus was blackened, and contained a little extravasated blood, and its mucous coat was readily detached. The mucous membrane of the small intestines—which contained partly digested food, was of a rose-red colour. The right lung contained some minute patches of extravasated blood.

THOS. STEVENSON, M.D.

12. *Danillo on Changes in the Cerebral Cortex in Alcoholic and Absinthic Intoxication.*—The author undertook (in the laboratory of Professor Vulpian in Paris) a series of experiments upon dogs, with the view of studying the excito-motor reaction of the cerebral cortex, under the influence of large doses of ethylic alcohol, and extract of absinthe. He

injected the poisons into the posterior saphena vein; the dose of alcohol (45 grammes) being two to four grammes per kilogramme of the animal's body, that of absinthe 0.15 to 1.5 gramme at each dose. The results at which the author (*Vratch*, 1882, No. 10) arrived are these. 1. In the comatose state induced in a dog by alcohol, the motor reaction of the cortex falls in a considerable degree. 2. Prolonged faradisation of the motor region in a dog, intoxicated to the degree of complete analgesia, does not produce any fits of cortical epilepsy, which easily follows in a non-intoxicated animal. 3. A fit of cortical epilepsy, produced in a non-alcoholised dog, is suppressed within fifteen to twenty seconds through an injection of alcohol (45 to 30 per cent.) in a dose of not less than a gramme to each kilogramme of the animal's weight. 4. A fit of epilepsy from absinthe, whether of cerebral or of spinal origin, may be interrupted at any stage by an alcoholic injection, under the same conditions as in a case of cortical epilepsy. 5. In alcoholised dogs, injection of extract of absinthe does not produce either epileptic fits or hallucinations. 6. The hallucinations produced may be at once interrupted by means of an alcoholic injection. Dr. Danillo tried also to detect, experimentally, the point where hallucinations are localised, and came to the conclusion that they are produced exclusively in the grey substance of the hemispheres.

V. IDELSON, M.D.

13. *Emmert on Wounds of the Aorta*.—Wounds of the descending aorta within the chest-cavity are rare, except as the result of gun-shot injury. Such a case—the result of a stab—is recorded in Friedreich's *Blatt. für Gerichtl. Med.*, 1882, p. 161. A man was stabbed in the back with a knife whilst walking in the street. He lived twenty-four hours. The knife had entered the back near the third dorsal vertebra, and penetrated the aorta just below where the left subclavian artery is given off. The blade was broken, and after death was found sticking in the wound, its flat surfaces being directed upwards and downwards. The wound in the aorta gaped for a distance of 1 centimètre (2-5ths of an inch), and there was a cylindrical clot of blood in the vessel extending for 4 centimètres (1½ inch) to the subclavian artery. The knife had also penetrated the third dorsal vertebra, and its point was firmly embedded in the intervertebral substance between the third and fourth dorsal vertebræ, and had penetrated into the cavity of the spinal column. The width of the blade was 8 or 9 millimètres (3-8ths of an inch). Death occurred from hæmorrhage into the pleural cavity, and consequent obstruction to respiration. Dr. Emmert, the reporter of the above case, also records a second case of wounding of the aorta, the result of a gun-shot wound. A rifle had been fired at the deceased man, probably at a distance of 100 yards, and from an elevation. His blouse and shirt were pierced by a hole 6 or 7 millimètres (¼ inch) in diameter, and the bullet had penetrated the chest-wall 4 or 5 centimètres (1¾ inch) from the right shoulder, and 6 centimètres (2¼ inches) below the clavicle. The wound passed from above downwards and inwards between the third and fourth ribs, without wounding the right lung; and the bullet, which was 10 millimètres long, and 5 millimètres wide (2-5ths by 1-5th of an inch), had penetrated the pericardium, and was lodged in its sac. The aorta was penetrated just above the aortic valves, where there was a triangular rent in the inner coat. Indeed, the aorta must have been grazed, and not penetrated, by the rifle-bullet. Copious hæmorrhage had taken place into the peri-

cardial sac and into the right lung, which were both filled with blood. Death was the result of compression. It is not known how long the man survived the injury.

14. *Post Mortem Injuries from Insects*.—The ravages inflicted upon the dead body by ants and other insects must not be overlooked by the medical jurist. Attention is drawn to the injuries resulting from the stings of ants in an actual case (*Pharm. Zeitung*, No. 102, 1881). On the corpse of an infant, which had died from convulsions, considerable injuries, simulating those of an *ante mortem* character, and which might have given rise to a false charge of violence, were observed. It was conclusively proved that the origin of these was due to the action of ants after death, and formic acid was extracted from the injured portions of the corpse.

THOS. STEVENSON, M.D.

REVIEWS.

Spirillum Fever: Synonyms, Famine or Relapsing Fever; as seen in Western India. By H. VANDYKE CARTER, M.D.Lond., Surgeon-Major I.M.D., Surgeon in charge of the Goculdas Tejpal Hospital, etc. London: J. and A. Churchill.

DR. VANDYKE CARTER'S name is so associated with scientific research of an exact nature, that great expectations could not fail to be excited by the appearance of a new work from his pen. His previous labours, and his knowledge of the country, qualified him in a peculiar manner for an investigation into the fever epidemic that accompanied the dearth prevailing in Western India between 1876 and 1879. Into this work the author threw himself with untiring energy; and, if personal acquaintance with a disease confers additional qualification upon a writer, the author, having suffered twice from the fever, has this advantage, and is able to contribute his own experience. The subject of relapsing fever is treated with a breadth of grasp, a rigid adherence to scientific methods, and a mastery of detail, which stamp the writer as an observer of the highest order. The work is by far the most complete monograph on the subject, and its merit has been appropriately recognised by the award of the Stewart Prize of the British Medical Association.

Relapsing, or spirillum fever, as the author, for reasons to be subsequently given, proposes to call it, presents many points of interest to the epidemiologist, the pathologist, and the clinical physician. It is the one epidemic specific fever that has been proved to be connected with a recognisable blood-pathophyte, and to be capable of comparative study. Its visitations to our country are so widely separated by time, that comparatively few are practically familiar with its features, and no opportunity has been afforded in England of a study of the fever since Obermeier's discovery of the blood-spirillum. It is on these various accounts particularly important to have a complete treatise on the subject, and Dr. Vandyke Carter has supplied us with a work, the value of which it is difficult to overestimate. A tropical country like India presented difficulties in investigation, which would not occur in our own climes. Fevers are more or less constantly present, and liable to periodic exacerbations; and the endemic fevers present a type the nearest allied to relapsing fever. In the microscopic examination of the blood, however, there is in competent hands, a

test by which relapsing or spirillum fever may be distinguished from all others, and by means of which it has been completely established that the fever which followed the famine on the Deccan plain is identical with the relapsing or famine fever of the European and American continents.

The work is divided into three sections. The first deals with a history of the epidemic. The author commences by analysing the ordinary conditions of the Mofussil and Bombay, pointing out the abnormal conditions occurring from 1876 to 1879, and proving by analogy and direct observation that the fever what attended them to a high degree was relapsing or famine fever. With regard to Bombay, it is shown that the fever-sickness was independent of local dearth, and it is traced to the mass of immigrants, amongst whom it chiefly prevailed, flocking to the town in search of work and food. An useful chart is given of the correlated data of the late famine and fever sickness in the Bombay Presidency, by which it is seen that fever followed upon, rather than proceeded hand-in-hand with, famine.

The second section deals with the clinical history of spirillum infection. The author, as we have already stated, and as the title of his work indicates, prefers for the designation of the disease the name 'spirillum fever'; and his reasons for this choice are weighty. In the first place, a considerable proportion of surviving cases, and most of the fatal cases in man, do not relapse, and, as a rule, but one febrile attack is produced by inoculation of the quadrumanus. In the next place, by far the largest proportion of cases could not be said to result from starvation. Objections are great to the term recurrent typhus, employed on the continent. 'Lastly,' says the author, 'through many early perplexities having learnt the value of one characteristic, the presence of which was a never-failing guide to diagnosis, prognosis, and treatment, I was in a measure impelled to adopt, as a synonym of relapsing or famine fever, the cognomen "spirillum fever", which, whilst not excluding the appropriate use of current terms, will be found to apply where they are unsuitable.'

A valuable general description of the disease is first given, in which the fever is traced from its invasion to its decline and convalescence. The crisis, which constitutes one of the remarkable phenomena of the disease, occurs most frequently during the night of the sixth or seventh day, there usually happening a brief augmentation of all the symptoms, with the addition of some delirium (*perturbatio critica*); and immediately afterwards a complete reversion of symptoms takes place, the condition of the patient becoming totally changed in the course of six to twelve hours. The crisis is almost invariably attended with copious perspiration, which, beginning before the decline of the pyrexia, may persist long afterwards. The fall of temperature is, as is well known, hardly equalled by any other disease, amounting to 5 deg., 7 deg., or 10 deg., and the temperature reaches as low as 97 deg. or 96 deg., the patient's condition approaching to collapse. The author divides the fever into the following stages: 1. First or invasion attack; 2. First apyretic interval; 3. Second attack—first recurrence or relapse; 4. Second non-febrile attack, followed by second, third, and fourth relapses, and periods of apyrexia when these occur. The clinical summary is drawn with a masterly hand, but is far too long for reproduction, and incapable of condensation. It is illustrated by a series of characteristic cases.

The next chapter deals with general phenomena.

The prodromata are not well defined. Weariness, pains in the back and limbs, headache, flushing, chills, night-sweats, a sense of burning in the eyes, or in the palms and soles, fixed neuralgic pains, hemicrania, vomiting, turgescence of the spleen (without pain), appear to be the more common of the initiatory symptoms; but, though occurring when the blood-contamination becomes evident, they do not show any fixed relation to the new state of the blood. Amongst the general phenomena, the author draws attention to the physiognomy of patients during the course of high fever, which was new to observers at Bombay, and was so striking as to be recognisable at a glance. 'After two or three days, the visage acquires a livid or bronzed hue, which is not like the effect of sun or dirt, or quite the flush of ordinary fever or of thoracic disease, but is comparable rather to a combination of a dusky typhus hue, with the semitranslucent tint of native skins. It was best seen in Hindoo agriculturists and wandering mendicants, and less well in the more pallid Mussulman weavers and town residents; in black skins it was rarely visible. Turgescence of the integuments was rare; the conjunctivæ were clouded and seldom injected, the eyes heavy rather than bright or suffused, the pupils large rather than contracted. More significant is the weary, haggard, or hapless expression of the patient; features shrunk or drawn, with a slight frown and raising of the nostrils and upper lip, indicative of distress, whilst the attention is, as it were, concentrated inwardly. Sometimes the expression was very stolid. This remarkable "facies" seemed most striking when the blood was charged with the parasite, and the abdominal symptoms pronounced.' It is shown that at or near the close of the invasion attack there is an aggravation of the febrile and general excitement, and in about one-fourth of the cases under observation there was a clear indication of a 'perturbatio critica' ushered in by chills or pronounced rigors, of a few hours' duration at most, and immediately preceding the crisis. The importance of a recognition of this period is shown by the fact, that more than 54 per cent. of all deaths happen at this period of the invasion attack.

Termination by crisis, according to the author, occurs in at least 90 per cent. It presents considerable variations in its phenomena, but usually no difficulty is presented in its recognition, both by the general symptoms and the state of the blood; the abrupt cessation of the fever and the disappearance of the spirillum being distinctive. The author, however, goes on to say: 'It is necessary to bear in mind that either of these phenomena may occur separately, and the only proof of a true crisis is the non-existence of visible blood-contamination.' Termination by lysis, which took place in about 10 per cent., is shown to be more dangerous than that by crisis, the tendency to prostration being invariable, and a typhoid state supervening much more frequently than usual.

The special symptoms are considered in such detail and at such length, that we cannot even allude to many, and the reader must be referred to the original for minute and precise observations. Vomiting was more frequent in some classes of cases than in others. It occurred in both abortive and relapsing forms of fever, and the most striking examples happened in young males. It could not be said to bear distinct prognostic import, but was rather less frequent amongst fatal cases generally than among survivors. The description of the pulse is accompanied by a page of good sphygmographic

tracings. It is shown that neither respiration nor pulse ascend proportionately to the temperature at the initiation of the relapse, nor do they decline at the fall in equal proportion. Epigastric tenderness, in some cases attributed to enlargement or acute congestion of the uncovered left lobe of the liver, was present in about 20 per cent. of invasion attacks and 30 per cent. of relapses. The spleen, as noted by other observers, showed signs of disturbance, and in nearly half of the cases observed during life enlargement of this organ was detected. The condition of the urine in both febrile and apyretic stages is carefully given. Albumen in small proportion was found to be rather frequent, chiefly at the close of pronounced febrile attacks and a little later; most commonly in first attacks. It rarely amounted to much, and was not associated with marked or peculiar symptoms. The chapter which deals with the pyrexia is extremely full, and illustrated with many valuable charts of characteristic and peculiar cases. Following this is a chapter on the complications, amongst which we have only space to notice two. Cerebral hæmorrhage of a copious amount occurred in eight of fifty-four necropsies (one-sixth of the whole). The amount of extravasated blood varied from two to eight ounces. Its site was always outside, and mainly at the vertex of the hemispheres; five times on both sides, twice on the right, and once on the left side. The rarity of large extravasations within the brain-substance is remarked on, only one instance being seen, and that accompanied by inflammatory softening. In this case, which terminated on the fifth day of first apyretic interval, 'pyæmia (?) having set in, there was hæmorrhage with suppuration beneath the arachnoid and clots in brain-substance; purulent foci in one lung'. This clearly was an exceptional and complicated case. As to the source of the blood in the other cases, 'it was often possible to trace the effusion alongside the middle cerebral artery (here of the right side), the vertically ascending branches of which, upon reaching their highest point at the upper surface of the hemispheres, and there changing their direction to the transverse or descending, whilst comparatively unsupported in the loose meshes of the pia mater, seemed to be especially liable to impaction and rupture.' The hæmorrhage gave rise to more or less complete insensibility; yet, even when established, the coma was not of the usual apoplectic character. It occurred always about the termination of specific fever, and three times in seven this pyrexia belonged to a relapse. No instance of recovery was known.

Under the head of skin-eruptions, it is stated that in about ten per cent. there were minute rose-pink spots, raised, readily effaced, and either fading forthwith or changing into purplish, more persistent stains. Occasionally, true petechiæ appeared at once. More rarely a diffused mottling was perceptible, and at times vibices. The pink spots, of which a chromograph from a drawing by the author is given, occur in crops with the fever, and may continue to appear later; they are equally frequent in first attacks and in relapses. They are usually not seen until the acme, but, more rarely, as early as the third or second day. They appear to come out in the night. Their most common sites are the infraclavicular regions, the sides of the chest, the front of the abdomen, the front and inner sides of the forearms and arms, and less often the lower extremities. Their successive changes and morbid anatomy are given. Regarding this eruption the author remarks, 'In general aspect their resem-

blance is mostly to the eruption of *typhus exanthematicus*; but otherwise to that of *typhus abdominalis* as regards scanty numbers and advent in successive crops; so that, supposing the ordinary distinction of English typhus and enteric eruptions to be insisted on (a point to myself seeming hardly tenable), then these spots would be regarded as partaking of a mixed character.' Jaundice, as observed in European epidemics, was present in many cases. The symptom was much more frequent in severe than in mild cases, and usually it was of a more intense character: it occurred in about 15 per cent of survivals, and in 56.5 per cent. of fatal cases. Spirillar fever does not seem to be associated with any definite sequelæ, but an attack sometimes brought into play a latent tendency or aggravated existing disease.

The mortality in this Indian epidemic was unusually high, being at the rate of 18.02 per cent, in 616 demonstrated cases. This is considered by the author to show the severity of the epidemic, as in by far the majority life seemed to be destroyed by febrile distress or consequent exhaustion; pneumonia, cardiac failure, and cerebral hæmorrhage contributing to the result. The mortality was greatest in females, at the extremes of life, and amongst the poor. The anatomical lesions are fully described in a systematic manner, and, whilst none are pathognomonic, the following were the most characteristic: cerebral hæmorrhage, collapse of lungs and pneumonia, enlargement and pallor of liver, enlargement or firmness and infarcts of spleen, enlargement and pallor of kidneys, congestion and extravasations in the walls of the intestinal canal.

Coming to diagnosis, the author, in treating of the recognition of relapsing fever as a distinct disease, traces the various steps by which it has been separated from typhus and enteric fevers, and then proceeds to identify the Indian with the European disease. There then follows the 'clinical diagnosis', in which special stress is laid upon adequate examination of the blood. The important signs at the various stages are indicated, and the diseases from which it has to be distinguished. The chapter on treatment is short, owing to the concurrence of Indian with other experience as to the inadequacy of drugs to shorten the specific fever or check its recurrence. Attempts to 'neutralise the poison', antiperiodic and antipyretic treatment, alike fail, and the rôle of the physician is confined to piloting the vessel through the troubled waters.

Section III treats of the pathology of spirillum fever. Chapter I, dealing with the 'aspects of the blood, general and specific', is one of the most important in the volume. Though the interest naturally centres in the spirochæta, discovered by Obermeier in 1872, the action of the parasite on its environment constitutes the phenomena of the fever, and any account which did not include the condition of the normal blood-corpuscles, and other elements present in the blood, would be manifestly incomplete. Detailed instructions are given for examining the blood and tissues, the latest methods being mentioned. Special stress is laid on the importance of the Albrecht process. The changes in the blood-plasma, the appearances presented by the coloured and colourless corpuscles, are minutely described. Large granule-cells are shown to be relatively common at the close of pyrexia, and are oftener found in the second or more pronounced attack: altered epithelium and free protoplasm are also present. The occurrence of filaments, rods, and granules is minutely entered into, but it is shown that their sig-

nificance is doubtful. Then follows a very complete account of the spirillum, its dimensions, shape, colour and consistence, its movements and numbers, etc. Dr. Carter computes that 250 millions of spirilla would be rather an under-estimate of the aggregation of spirilla in a case. Accurate enumeration is, however, clinically inapplicable, and the terms 'very few', 'few', 'many', 'very many', and 'swarms' are employed to represent their prevalence. It is shown that during the earlier and commonly longer part of the incubation period the spirillum is entirely absent, whilst during the latter part it is invariably present. During the first, or invasion attack (data for which in man are mostly wanting), in the monkey the spirilla in the earliest hours were few and apparently intermittent. The number of organisms increased moderately (if at all) prior to the advent of fever; but with rise of temperature it augmented, though not in any fixed proportions. In the first relapse, the organism was (in cases examined specially for the purpose) always found within a period of forty-eight hours prior to fever. On the fourth or third day before relapse, dubious (? immature) filaments may be noted heralding the spirillum. When the spirillum is first seen it is very sparse, being, however, of ordinary aspect. The organisms still seem to intermit, and their number hardly increases. The following summary by the author conveys the most important facts of spirillar infection in the greatest brevity. 'On scrutiny of upwards of 270 ordinary cases of relapsing fever, I am led to conclude that the parasite is practically always present throughout the febrile stages; and, although in about 20 per cent. of invasion attacks, and 21 per cent. of relapses (after excluding the first day), the spirillum remained undetected, yet analysis of the notes commonly showed some such explanation of this absence as the following. Early or irregular occurrence of the crisis, when naturally the organism disappears, this remark being applicable to invasions seen late, as usual, and to relapses, which are always of uncertain duration; defective observation was doubtless also concerned; possibly, too, variations of temperature, especially the rise when the organisms may become so few as to be overlooked, or an unusually low temperature; local complications (*e.g.*, pneumonia), and aspect of the red discs, were noted in some cases, whilst in a few the explanation of absence could not be accounted for in the older notes here quoted. In all late observations made by newer methods, and in all comparative instances of high fever, the spirillum was invariably found.' Admirable illustrations of spirilla and of the blood-changes, and charts of the correlated disturbances of the circulation, respiration, and temperature, and spirillar presence, accompany this section.

The next chapter deals with the etiology of spirillum fever, the predisposing causes, and contagion. Much important information is given under this heading, and especially interesting is the account of accidental inoculations at necropsies. As regards the latter, an important fact appears for the first time to be established, viz., that infection followed the inoculation of non-spirillar blood at the postcritical period. 'There seems to be no other explanation of the fact, than the supposition that the blood at this time may contain germs of the spirilla.' These accidental necropsical inoculations gave an incubation period of about three and a half to seven days, and, reviewing all the evidence on this point, the author judges the average period to be not more than a

week. The author's general conclusions as to contagion are as follows. 1. The disease spreads solely through means of actual contact with the sick. 2. A single individual may become the source of a new outbreak of fever. 3. Amongst a group of associated individuals, the disease does not appear simultaneously in all, but separately and successively at intervals more or less brief. 4. The disease is communicable during its successive febrile manifestations, and also for a short time, both before and after the earliest of these. 5. A prompt reinfection is possible, no immunity being conferred by a first attack.

The section concludes with a philosophical consideration of the nature of the disease, dealing with its essential relations, its more characteristic symptoms, and the conditions of its appearance as an epidemic.

Two important appendices close the volume: 1. On the artificial production of spirillum fever in the monkey; 2. Culture experiments. Space will not allow our entering into any consideration of these interesting topics.

We have endeavoured to give some idea of the method and scope of the work; but it is only by close and attentive perusal of its pages, that the reader can form any idea of the enormous amount of information therein contained, and of the ability, care, and patience expended on the inquiry of which the volume is the outcome.

STEPHEN MACKENZIE, M.D.

Experimental Physiology: its Benefits to Mankind. With an Address on Unveiling the Statue of William Harvey at Folkestone, 6th of August 1881. By RICHARD OWEN, C.B., M.D., F.R.S., etc., Foreign Associate of the Institute of France. London: Longmans, Green, and Co. 1882.

THE name and great reputation of the venerable author of this essay will secure for it attentive perusal, both from friends and foes. It is full of apt illustration, shows thorough knowledge of even the most recent advances in physiology, and is written with all the earnestness and vigour of youth.

Few anecdotes are better told, or better calculated to make those who are opposed to all research by experiment on living animals reflect, than that which led John Hunter on to what may be considered, perhaps, his greatest practical discovery. It is, unfortunately, only surgeons, and surgeons learned enough to look back to the records of past times, who can justly estimate the benefits conferred on man by this discovery. The course of Hunter's physiological reasoning led him to put a ligature round the artery supplying the growing antler of the deer. The pulsations of the vessels of the formative 'velvet' ceased, and soon the antler began to cool.

'The buck was released and bounded away. About a week after this vivisection, Hunter revisited the park. The animal was caught, and to the experimenter's surprise the vessels of the antler were again pulsating, the velvet had recovered its warmth, the growth was proceeding as usual. Hunter, thereupon, ordered the buck to be killed (scores are hunted and slain annually for venison). He injected the arterial system, thinking he might have been mistaken in the vessel he had tied. No! The canal of the carotid was obliterated. But sundry, and ordinarily minute branches sent off below, or on the heart's side of the ligature, had enlarged, and had carried the blood to other capillaries communicating with the carotid above the ligature; and the enlarge-

ment of these previously inconspicuous vessels had restored the supply to the cold antler, and reintegrated the power of growth. "And what scientific result," might ask a member of the "Victoria Street Society," "could attend so detestable a practice?"—such "vivisectional pandering to curiosity"? The result was a power of relieving an enormous amount of human suffering and untimely death.

'At Hunter's Hospital—St. George's—cases of popliteal aneurism were not uncommon. The sufferers were usually coachmen of the rich, subject to the pressure of the hard margin of the box-seat upon the vessels of the ham.

'Now, Hunter, turning over in his mind the phenomena he had observed and caused in vivisectioning the deer, thought thus: "Suppose, instead of amputating the man's limb, I were to cut down and tie the femoral artery at some distance from the diseased part so as to diminish the risk of hæmorrhage, such as attends the meddling with the unsound artery near the tumour. It might stop the flow of blood into the aneurismal sac long enough, at least, to allow the blood there to coagulate and form a natural plug; and, if the human capillaries should behave like the cervine's, the man's leg may become nourished independently of the popliteal channel."

'Accordingly, Hunter said to his groaning patient, who had previously consented to the happily not performed amputation—and there was no anæsthetic then in use: "My good man, if you will let me make a small cut in your thigh, it is possible I may save your life and your limb." "God bless you, sir," said the sufferer; "do what you think best, so you put me soon out of this torment." Hunter explained to his assistant and the surrounding pupils the results which he hoped and believed would follow a repetition on his patient of the vivisectional experiment on the deer. No sooner was the strong current of blood checked by the ligature of the femoral artery, than the tumour ceased to beat and began to diminish. The patient exclaimed with joy, that the agony in the ham was gone. It is true, the leg, like the antler, began to part with its vital warmth. "Don't apply any artificial heat; simply swathe the foot and leg in flannels," were the vivisectionist's directions. In twenty-four hours the natural warmth began to return: not so the pulsations of the tumour; this morbid mass went on decreasing. In six weeks the coachman walked out of the hospital on both legs, cured of his aneurism. Surgery became possessed of a new and beneficent power, for which it now had sure physiological grounds.'

Admitting, as we think every candid reader must, that this essay is replete with facts and arguments showing that experiments on animals are justified by the results, it is to be regretted that the author now and then assails his adversaries with a severity to be deprecated in discussions of this kind. Those who are altogether opposed to experiments on animals, no doubt number among them some who have thought little, and possibly read less, of what is to be said in favour of this method of interrogating nature. There are, however, some among them who have thoroughly studied the question; who have made up their minds after full and conscientious inquiry; whose convictions are sincere, and whose motives are perfectly pure. Such adversaries are always worthy of respect. The main cause of difference between them and those who advocate experiment on living animals, is this; they do not know, and have failed to realise, the gigantic nature of the ills that experimental physiologists hope in some degree to

remedy. They cannot comprehend that, among physiologists, there is an active and benevolent enthusiasm as strong as, if not stronger than, their own. They forget that physiologists also have convictions which are sincere and motives which are pure. They forget that they have sometimes given up themselves to experiment in the noblest way; that the martyr spirit exists among them; that to them their deity is not a 'Moloch'; they worship the god of science and of truth; they have a sincere and living faith in their cause, and no legal enactment can ever shake that faith, although it may cause the worship to be carried on in secret. This is, in truth, the real danger of the agitation against which the illustrious Owen so earnestly pleads. ROBERT McDONNELL, M.D.

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The Diagnosis of Pott's Disease of the Spine before the Stage of Deformity. By V. P. GIBNEY, A.M., M.D., of the Hospital for the Ruptured and Crippled, New York. 1882.

IN urging the importance of early diagnosis in cases of caries of the vertebra, Dr. Gibney refers to two plans commonly adopted by medical men, which are not only uncertain methods, but one of which is likely to be productive of much mischief. With regard to pressure upon, or percussion of the spinous processes, he urges that nothing is to be gained by such methods of examination, and the patient is thus often irritated to such an extent that a good examination is rendered practically impossible. He considers that it may be laid down, as a rule, that tenderness on pressure, either with the hand or with a hot sponge, is never present in the early stages of a vertebral osteitis. The other plan of diagnosis to which the author refers is 'forcible pressure with the hand, or blows with the same upon the top of the head or shoulders in the long axis of the body'. We entirely concur with Dr. Gibney in this opinion, and we consider that the method is as unsatisfactory as it is unscientific. Dr. Gibney records an interesting case, in which a child was apparently nearly cured of the disease, when the surgeon in attendance applied this test. Pain in the back was immediately produced, and continued severe for several days. The disease, thus re-established, increased rapidly, and paraplegia and abscesses followed, and the deformity became very great. Several points of diagnosis are referred to as valuable; such as 'irregular neuroses' occurring for a fortnight or longer; the assumption of positions which rest the spine while the child is at play, and when he is getting into and out of bed; a moaning or restlessness during sleep, with little cries occasionally; a history of malnutrition of the patient or his parents; and the record of injury to the spine. The manner in which the child stoops is referred to as very important, the efforts to save the spine from movement being very characteristic of caries. Dr. Gibney has observed that, when the disease is situated in the dorsal region, there is a 'fondness, very marked, for the prone position'.

Although this fact was observed in this country many years ago, and methods of treatment adopted which provided means for the patients assuming the prone position with great comfort to themselves, it has been by no means generally recognised by the profession. The position which the patient, however young, finds most comfortable, seems to us to be that which, irrespectively of all theory, will probably be most beneficial to him.

We are glad to find that Dr. Gibney records this fact, and we shall be glad to learn, in some subse-

quent publication, that he has allowed his patients to obtain the advantages which we know from experience to be derived from placing these patients in the prone position. Dr. Gibney's paper is full of sound practical remarks. E. NOBLE SMITH.

Nitro-Glycerine as a Remedy for Angina Pectoris. By WILLIAM MURRELL, M.D., M.R.C.P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. London: H. K. Lewis. 1882.

In this well-arranged and clearly written little volume, Dr. Murrell introduces to the serious notice of the profession a substance which has been long in use for its destructive powers; but which now promises well to do something for the relief of human suffering.

The physiological properties of the drug nitro-glycerine were the subject of keen dispute twenty-five years ago; and it was with some heedlessness, if not scepticism, that Dr. Murrell himself took his first dose of nitro-glycerine, after reading the paper of Mr. A. G. Field, and its subsequent discussions by George Harley, Fuller, Thorowgood, and others. This he did by tasting the cork, moistened with a 1 per cent. solution of the drug. Acceleration of pulse, powerful throbbing of the systemic vessels, and a 'splitting headache' immediately ensued, and convinced Dr. Murrell of the potency of the drug. He then tried some systematic experiments by administering the drug cautiously in various complaints, neuralgia, heart-disease, etc., and with various results; the symptoms produced only differing, however, in degree from those he had himself experienced. Dr. Murrell next, with the aid of Dr. Fancourt Barnes, compared the influence of nitro-glycerine with that of nitrite of amyl upon the pulse, in one hundred and fifty tracings of his own pulse. He found that the drugs thus tested have a similar effect upon the pulse, both producing a marked degree of diastole, and an increased frequency; but they do this within different times, the full activity of the amyl being observed in from fifteen to twenty seconds; that of nitro-glycerine in six to seven minutes. The effect of amyl is lost within two minutes of its administration; that of nitro-glycerine enduring for half an hour.

A most interesting series of experiments are next detailed, which Dr. Murrell made upon a patient with episodias, who was so accommodating as to suffer none of the distressing symptoms of the drug, whilst all the essential effects of its physiological action upon him were fully obtained. A most remarkable increase in the secretion of the urine was found to result from the drug in this case, and the very exact experiments upon this point are, we think, among the most valuable observations in the book. The specific gravity, and the acidity of the urine, were both diminished during the diuresis, so that we may conclude that the watery ingredients were mainly excreted; a quantitative observation of the urea would have greatly increased the value of the experiment, since, in certain cases of kidney and heart disease, with high arterial tension, uræmic and dropsical symptoms may be mitigated or removed by the diuretic action of the drug.

The special object of the work is, however, to advocate the use of nitro-glycerine in angina pectoris; and Dr. Murrell relates twelve very interesting cases of angina, either simple or combined with other diseases, in all of which the drug exercised some good influence, and in some of which it was markedly

beneficial. Dr. Murrell's directions as to preparation and dosage are precise, and we can commend his work as thoroughly good, and well worthy of perusal and study. R. D. P.

A Practical Treatise on Diseases of the Skin. By LOUIS A. DUHRING, M.D. Third edition, revised and enlarged. Philadelphia and London: J. B. Lippincott and Co. 1882.

THIS new edition of Dr. Duhring's well-known treatise will be welcomed by dermatologists in every part of the world, whilst the rapidity with which the work has passed into three successive editions is an evidence of its usefulness to practitioners of medicine.

Dr. Duhring has imposed on himself the duty of recording, in each successive edition, the continued progress of dermatology; and when the great literary activity of the section of the profession who occupy themselves with this specialty, and the amount of good original work done by not a few of them, are taken into account, it is evident that the task is a laborious one. The task, onerous as it is, has been thoroughly well executed. The present edition contains notices of all the recent contributions to dermatology which deserve a place in a work of this high class, and the result is a book which forms a complete compendium of all that is known of the nature, pathology, and treatment of skin-diseases up to the present time. As a work suitable for reference, it deserves a place in every medical library.

New matter is found in almost every page of this edition. In the anatomical section we find a full account of the sweat-glands, in which Dr. Klein's description is followed, whilst the more recent researches relating to the physiology of the secretion of sweat are duly noticed. Under the head of Lymphangioma, Van Harlingen's interesting case is referred to, in which a large number of tumours, distributed over the body, were found to consist of fibrous and granulation cell-tissue, with numerous irregular spaces—sections of dilated lymphatic vessels. Under Eczema Mammæ, a short account is added of the affections described as Page's Disease, or Malignant Papillary Dermatitis. In the previous edition, Molluscum Contagiosum was classed among the disorders of secretion, under the head Molluscum Sebaceum. It illustrates how attentive Dr. Duhring has been to the progress of pathological research when we find that, in the present edition, these peculiar little tumours are brought back to the class in which Virchow placed them many years ago. They now rank amongst the hypertrophies, under the head Molluscum Epitheliale.

American, English, German, and French medical literature have been carefully utilised in the preparation of the edition, and nothing of any importance in dermatology appears to have been omitted. We congratulate Dr. Duhring on the well-deserved success of his book, and we cordially recommend it to all practitioners actively engaged in the exercise of their profession. G. THIN, M.D.

WORKS ON CLIMATE.

1. *Klimatotherapie.* Von Dr. H. WEBER. Handbuch der Therapie. Vol. 2, part 1. 8vo, pp. 212. Leipzig: 1880.
2. *Eastbourne.* By GEORGE MOSELEY, F.R.C.S. 8vo, pp. 70. 1882.

3. *Brighton*. By ALFRED HAVILAND, M.R.C.S. Pp. 11. 1882.
4. *Brief Notes on Brighton*. By E. MACKEY, M.D. Pp. 8. 1882.
5. *The Climate of Undercliff*. By J. L. WHITEHEAD, M.D. Pp. 46. 1881.
6. *Le Climat de Cannes*. Par Dr. BERNARD. 12mo, Pp. 29.
7. *Visit to Madeira*. By D. EMBLETON, M.D. 8vo, pp. 90. 1882.
8. *On Climate in Relation to Organic Nature*. By Dr. C. A. GORDON, M.D. 8vo, pp. 37. 1882.
9. *Rainfall and Climate in India*. By Sir JOS. FAYRER, K.C.S.I. Pp. 36. 1881.

1. Dr. Weber's work is an excellent epitome of what is known about climate. The author is intimately acquainted with foreign as well as with English sources of information, and has had large experience of his own. He has brought together his knowledge in a clearly arranged and very readable form. It is not, of course, nearly as full as the work, in four large volumes, with which the veteran Dr. Lombard of Geneva has recently enriched the subject; but the work before us is more concise and easily referred to than Dr. Lombard's, whose volumes sadly want an index. Dr. Weber has observed much impartiality in his judgment, and has not been led away by his partiality for mountain-climates to any extravagant praise of Davos. The comparative view which he furnishes of climates is far more useful than the details which are inseparable from local descriptions of sanatoria; most monographs err on the side of over-laudation of particular localities. We shall be glad to see this work in an English guise.

2. Mr. Moseley's work on Eastbourne, although written in too eulogistic a strain, gives a good account of that place, and of its wonderful progress. It has enjoyed the advantage of being laid out on a systematic plan by a liberal landlord; and many of the sanitary blunders which must arise when a town grows, one may say, by haphazard, may be avoided. Mr. Moseley compares the temperature and the mortality of most of the towns along the southern coast of England, and the result is favourable to the claims of his own place. The chief novelty of the book is that it recommends Eastbourne as a winter resort.

3, 4. Dr. Mackey's notes on the geology and climate of Brighton are judicious; and Mr. Haviland's account of Brighton, accompanied by a detailed map of its physical features, is well timed, as there has been a tendency of late to deprive that town of its fair fame. It should not be forgotten that towns, with crowded quarters and a poor population, must have a larger mortality than those which are well laid out, and whose inhabitants belong to the wealthier class.

5. The paper on Ventnor is little more than a laborious abstract of the meteorological observations carried on over some forty years by the Martins of that place.

6. Dr. Bernard's brochure on the ever growing Cannes contains nothing new or that calls for remark.

7. Dr. Embleton's account of Madeira is a very pleasant addition to former works on the subject. It treats in an interesting way of its early history and of its present condition and products, but does not go deeply into any climatic questions, although a most favourable opinion is expressed of the climate of the island.

8, 9. The last two pamphlets in our list aim at the discussion of more general questions. One has been embodied in Sir Jos. Fayrer's valuable work on Indian fevers, and does not require notice here. Dr. Gordon, who has had large experience in many lands, enters on a very wide subject, and one full of interest; but, as one of the speakers at the meeting at which his paper was read remarked, it raises such a variety of interesting questions, that it is rather difficult to handle them in such a notice as this. We observe that he doubts the efficacy of the eucalyptus in malaria. There is much variety of opinion on the subject.

J. MACPHERSON, M.D.

Diseases of Women. By ARTHUR W. EDIS, M.D., F.R.C.P., Assistant to the Physician to the Middlesex Hospital, etc. Second edition. With 160 Illustrations. London: Smith, Elder, and Co. 1882.

THE appearance of the second edition of Dr. Edis' work has followed quickly upon that of the first. The interval of time has been, indeed, so short that for all practical purposes the second may be regarded as a reprint of the first edition. Dr. Edis has, however, evidently lost no time in correcting, revising, pruning, and adding where it seemed necessary. The work worthily represents the gynaecological knowledge of to-day, and those who wish to see for themselves how amply it does this have only to compare it, chapter for chapter, with books which represent the knowledge of yesterday, such as those of West and Courty.

In discussing the vexed question of treatment of stenosis of the os internum, Dr. Edis arrives at the conclusion that division of the cervix is attended by less risks than dilatation by tents, and that if care be taken to follow up the treatment, the permanent effects are also more satisfactory. The chapters on abdominal tumours, including their diagnosis and treatment, are full of clinical experience, and are dealt with in a masterly manner. One important factor, in a work on gynaecology, is the illustration of the various instruments used in the practice thereof. In this respect, Dr. Edis has eminently succeeded. Hardly an instrument of importance has been omitted. FANCOURT BARNES, M.D.

The Student's Guide to Diseases of the Eye. By E. NETTLESHIP, F.R.C.S., Ophthalmic Surgeon to St. Thomas's Hospital. Second Edition. London: J. and A. Churchill. 1882.

THE reception of this book by the profession has fully confirmed the favourable opinion which we expressed on its first appearance. The second edition surpasses the first in many respects, notably in the improvement of its illustrations, several of which have been altered, and the total number increased by forty-eight. Coloured papers have been added for the purpose of detecting colour-blindness. For well-marked defects they answer their purpose admirably, a striking result being quickly and easily obtained. It is, however, difficult to detect the finer degrees by their aid, owing to the extreme difficulty in getting the particular confusion colours, and especially the paler ones, exactly represented on paper.

We cannot but repeat what we have said in substance before, that the student will find in this book a plain and accurate introduction to ophthalmology.

W. A. BRAILEY, M.D.

NEW INVENTIONS.

A CANNULATED NEEDLE FOR INTRODUCING WIRE SUTURES IN SURGICAL OPERATIONS.

The annoyance caused by the wire suture catching in the tissues, on account of the doubling and twisting necessary to retain it in the eye of the ordinary needle, is often very great, and the excessive oozing caused by the procedure most injurious.

In order to overcome this difficulty, Dr. George McClellan of Philadelphia had a little instrument constructed for him by Mr. Snowden, surgical cutler, No. 7, South 11th Street, which he has been constantly employing for several months in all operations where the approximation of the edges of the wounds required the introduction of wire sutures.

It consists of a long slender cannulated needle, having a slit at the point, and another at the shoulder, where it joins the handle.

A and B indicate the two slits or openings in the needle through which the wire is passed. In introducing the cannulated needle, the wire is of course either retracted or withdrawn; but, as soon as the point A issues at the desired place, the wire can be pushed forward, seized, and the needle withdrawn.

Although the idea of such a needle was entirely new to Dr. McClellan when he first had it constructed, he has since learned that it was suggested and used by several surgeons many years ago. Dr. W. L. Atlee used a needle on this principle in his operations for ovariectomy, and Dr. Paul B. Goddard had needles of various sizes and forms for the purpose of passing wire sutures; but neither of these surgeons appears to have encouraged their general use.

The ordinary forms of needle, including the 'screw-hole', and the 'gutter-eyed', as well as the more recent suggestion of Dr. Morgan of Baltimore, all require considerable time in their manipulation, and in many instances must be grasped by a holder, that they may be properly introduced. In all of them the wire is apt to become caught in the tissues, or dislodged from the eye or stylet, unless great care be taken to prevent it. The advantages of a cannulated needle, such as is shown in the accompanying figure, will be apparent at a glance. The simple direct puncture of the needle will be found to occasion

very little oozing; and, as the handle offers firm support in the hand of the operator, great accuracy

in the introduction of the sutures and complete exactness in the apposition of the parts are attained, the needle being made to transfix both margins of the wound at the same time, and the wire, when passed through, taking its place.

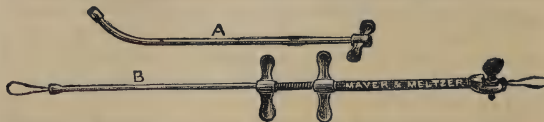
The tearing of the knotted wire about the eye of a needle often causes a laceration instead of a puncture; and in some regions, as in the perinaeum or vagina, this minute rent is very apt to tear further when the sutures are tightened. The wire should always be carefully straightened by running it over the edge of the thumb-nail, to avoid any kinks which might interfere with its passage through the cannulated needle. With this precaution, it may then be introduced with much greater rapidity and precision than in any other way.

Dr. McClellan has also found that this little instrument is very useful in taking the place of a tenaculum or artery-forceps, either of which often loosens or tears away the ligature when it is being removed. He simply passes the needle through a bleeding point, then forwards the wire and withdraws the needle, leaving the wire so that it can be doubled into a loop, traction upon which will enable an assistant to throw a ligature completely round the vessel or bleeding point, as readily as a tenaculum; with this advantage, that as soon as the vessel is secured the wire may be cut, thereby avoiding the danger of displacing the ligature. This form of needle may also be used for the purpose of exploring. Upon introducing the point into a part where blood, serum, or pus is suspected to have accumulated, the fluid, if any exist, will pass through the needle and appear at the slit near the shoulder.

Objection may be raised to this form of needle on the score of the possibility of its conveying septic matter, but the same fault may be found with the hypodermic syringe, and it can readily be remedied by always retaining a piece of wire within the cannulated needle when out of use, and never forgetting to dip it in carbolic oil, both before and after it has been employed. The needle can readily be made straight or curved, as may be desired, but the form shown in the accompanying figure, which is designed for the pocket-case, will, the inventor thinks, answer most purposes.

JARVIS'S WIRE-ECRASEUR, MODIFIED BY DR. JEFFERSON BETTMAN.

This is a modification of the Jarvis's snare, shown at the International Medical Congress. It was devised specially for the removal of nasal polypi and hypertrophic tissue covering the turbinated bones. Its action is simple and efficient, and, when properly used, it should occasion but little pain and loss of blood. In the original instrument, the sliding or outer

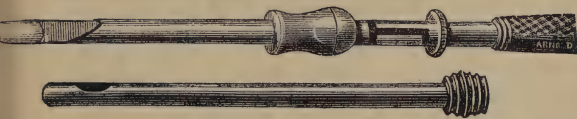


cannula was propelled by a milled nut or wheel, which has now been replaced by a flattened bar; this, for mechanical reasons, entails less expenditure of force, and can be manipulated with greater ease and comfort. One of the chief points in the modified écraseur consists in the clamp-screw to fasten the free ends of the wire loop. In Jarvis's instrument these were wound around small retention-pins, and, if the case required, had to be undone and rewound.

This is obviated in the modification; a simple turn of the screw releasing or clamping the wire. Another point hereby gained is the impossibility of a fracture; the wire, except at its looped extremity, remaining straight throughout its entire length. The straight tube, which is used for operations in the nasal cavity, can be unscrewed from the handle, and replaced by a long tube with the postnasal curve, so that tumours or redundant tissue, growing from the posterior nares or in the naso-pharyngeal space, can be operated upon through the mouth. The wire used is the same as has been already recommended by Voltolini (*Anwendung der Galvano-caustik*, Wien, 1872, s. 251), i.e., annealed steel pianoforte strings, Nos. 5 or 6. The instrument is made by Messrs. Mayer and Meltzer.

AN ANTISEPTIC TROCAR CONVERTIBLE INTO A PROBE-POINTED KNIFE.

Messrs. Arnold and Sons have made for Dr. Ward Cousins a modification of the antiseptic trocar described in the *Lancet*, Nov. 26th, 1881. After, by means of the trocar, the existence of fluid has been determined, the inner tube of the instrument can be



removed, and a probe-pointed knife, which fits exactly, can be passed along it and is made so as to leave a cutting edge of $1\frac{1}{4}$ inch in length. The direction of the edge of the knife is shown by a mark on the handle. This instrument may prove useful in cases of deep-seated abscesses and empyema.

MISCELLANY.

MR. HENRY DE MÉRIC has resigned his appointment as surgeon to the French Hospital and Dispensary.

PAPER-SOAP.—Dr. Addinell Hewson, of Philadelphia, has recently found that tissue and manilla paper can be so impregnated by immersion in a hot solution of English glycerine soap, that a slip of the size of a visiting card will answer for washing the hands or shaving. This furnishes not only a great convenience to travellers and others, as well as a saving of soap, but also a way of preventing contamination both in public and private.

POISONOUS COLOURS IN ARTICLES OF FOOD.—The German Government has just laid before the Reichstag a decree prohibiting the use of poisonous colours for the colouring of certain alimentary substances and food articles. The following articles are prohibited: antimony (oxide of antimony), arsenic, barium (except the sulphate), lead, chromium (except chromic oxide), cadmium, copper, mercury, (excepting annabar), zinc, tin, gamboge, picric acid.

VIRCHOW ON SOUPS AND BROTHS.—The distinguished German professor and politician has been accused of being the chief opponent of soup. He says that this is not true, for he had merely said that meat-broths are neither nutritious nor 'substantial'; that, if all the meat which one uses should be boiled and soup made of it, the meat would become, for the greater part, indigestible, and the soup would not be a substitute for it. Ordinary meat-broth or bouillon, in its pure form, can only be recognised as a condiment. By the addition of eggs, flour, fat, and other things, it may acquire a certain nourishing and heating value. It is, primarily, only a very dilute aqueous solution

of substances that are in part of low value as heat-producers, such as gelatine, and in part of the stimulating aromatic parts of the meat. Taken warm, it is of nearly the same value as coffee or tea, but is inferior to wine, schnapps, or beer; it only stimulates the nerves. It has one advantage over every other condiment, namely, it contains no poisonous substance; it is incomparably milder, hence much better adapted to feeble persons; and, finally, it can be conveniently combined with substances that are actually nutritious, and imparts to them an agreeable and 'substantial' taste.—*Scientific American*.

TOILET DRUNKENNESS.—Dr. Groussin (*Journal de Médecine de Paris*, 9th September 1882) has a letter on the curious form of drunkenness which he mildly describes as toilet drunkenness. Those who by birth or fortune, or by a combination of both, belong to what we call the upper classes, are subject, like other mortals, to all the faults and vices inherent in our nature; but their respectable position, and the money at their disposal, enable them to throw over their bad habits a veil which the world in general cannot see through, and which even the doctor can hardly raise. A lady whom Dr. Groussin lately attended four times complained of giddiness, headache, difficulty in walking, and a want of accuracy in manual movements. Fearing apoplexy, he turned all his attention in that direction, and prescribed purgatives, mustard foot-baths, and bicarbonate of soda to dilute the blood. He found by accident that this lady, otherwise excellent and kind to the poor, got drunk regularly four times a week on eau de Botot. She drank this water instead of using it to wash her mouth, and no one discovered it. Had she drunk wine, chartreuse, or cognac, her breath would have betrayed her to the least knowing person. Eau de Cologne and other toilet tinctures are used in the same way.

NATURAL EXCHANGES.—It has been observed by M. Fredericq (*Bull. Belg. Acad.*) that the blood of crabs and other crustaceans at Ostend has the same strong and bitter taste as the sea-water, and proves to have the same saline constitution. Crabs in brackish water, on the other hand, have a less salt blood; and the crayfish of rivers have very little of soluble salts in their blood. An exchange of salts seems to take place, in these animals, between the blood and the outer medium, producing approximate equilibrium of chemical composition. This probably occurs through the respiratory organ, and is according to the simple laws of diffusion. On the other hand, the blood of sea-fishes has an entirely different saline composition from that of the water; it is more or less isolated, presenting herein an evident superiority over the invertebrates referred to.

NOISES FOR INVALIDS.—Mr. G. A. Sala, in his recent book on America, writes:—"On this particular Sunday morning, I own I should have liked to remain an extra half-hour between the sheets. I was constrained, however, to rise by the persistent booming of the church bells. They rang me into nervousness, they rang me into consternation and præcordial anxiety, they rang me into a most irreverent and un-Sunday-like state of exasperation, and they rang me temporarily very nearly mad. There may have been a good many people sick unto death that morning at Baltimore, and the incessant clanging and jangling of the bells may have been as efficacious as the old "Mrs. Gamp" pulling the pillow from beneath their heads in order to terminate their sufferings. I suppose that campanology is a science, and I wish its votaries joy of it. I can understand the zeal of the "college youths" and other amateur bell-ringers who ring triple-bob-majors by the ten thousand, because at the conclusion of their labours they are sometimes regaled with a leg of mutton and trimmings for supper; but I do seriously trust that the time has arrived for quiet people all over the world to unite in a protest against the senseless, cruel, and barbarous practice of jangling bells in order to invite the public to attend divine worship. . . . I want to know, in the interest of the sick and nervous, what good these bells do anywhere? Do they render anybody more serious, virtuous, or devout? . . . I recommend the campan-

ological nuisance to the attention of all sensible physicians.' The Editor of the *Edinburgh Medical Journal* here states: '*Mutato nomine*, what clever, wise Mr. Sala writes of Baltimore might be written of the West End of Edinburgh, where, not only on Sundays, but on two or three evenings during the week, conversation is rendered impossible and life made unendurable by the fearful noises proceeding from a so-called peal of bells in a new cathedral spire.'

OLEORESIN OF MALE FERN: INCREASING ITS EFFICACY AGAINST TAPE-WORM.—According to E. Dieterich, the frequent failure of oleoresin of male fern as a remedy against tape-worm is to be ascribed to its irrational administration. It has become known that the popular 'worm-doctors', who use almost exclusively the oleoresin of male fern, and who hardly ever meet with a failure, administer the remedy in conjunction with castor-oil, instead of following it by the oil after one or two hours, as is usually done by practitioners. The object is to bring the extract, in an unaltered or undigested condition, into contact with the worm. The experiments which have been made by mixing one part of the oleoresin with two parts of castor-oil have been very successful, and this mode of administration deserves, therefore, the preference. Oleoresin of male fern is apt to derange the stomach, and, when enveloped partly in the oil, is likely to pass it more rapidly, which constitutes another advantage. The mixture has, it is true, an unpleasant taste. This may, however, be disguised by filling it in capsules of about 45 grains each. The dose may be regulated from six capsules to seven or eight more, according to circumstances. It is advisable to empty the bowels the preceding day by a mild purgative, best by castor-oil.

SMOKE ABATEMENT.—We are informed that Messrs. Smith, Elder & Co. have undertaken the publication of the Reports of the Smoke Abatement Committees of London and Manchester, for the year 1882, which includes the whole of the tests of heating and cooking apparatus, fuels, and furnace appliances. Numerous illustrations of apparatus, tables of results, and chemical report on composition of gases given off from domestic grates and stoves, by Professor W. Chandler Roberts, F.R.S., are added; also reports of the testing Engineer, Mr. D. K. Clark, M. Inst. C.E., explaining the relative efficiency and economy of kitcheners, stoves, and open-grates. The Committee have admitted reports on the methods of avoiding smoke, and on the distribution of heat in rooms from different descriptions of grates, that the volume may be useful to the general public as well as to manufacturers and inventors of heating appliances; and we have no doubt it will prove a unique and valuable work.

THE 'GONOCOCCUS.'—Neisser, in Breslau, who in 1879 published the discovery of a micrococcus which was to be found in every case of specific blennorrhoea, either of urethra or of eye, but nowhere else, has recently recorded his conviction that this 'gonococcus', as he calls it, is the specific agent in producing the disease; and quotes Aufrecht, Ehrlich, and Gafkey, the ophthalmologists Leber, Sattler, and Hirschberg, in support of his statements. But until recently the *experimentum crucis*—successful inoculation of the micrococci—had never been performed, from the simple fact that animals are not susceptible to the gonorrhoeal contagion, and human subjects have always preferred to acquire theirs in another way. Recently, however, Bokai, in Pesth, was so fortunate as to find six philanthropic students who placed their urethras at the disposal of science. With the 'gonococci' which Bokai had cultivated artificially from gonorrhoeal discharge, the six were inoculated; and three had the satisfaction of exhibiting a week later a classic gonorrhoea. For one somewhat familiar with the natural history of medical students, the experiment would have been far more convincing if the dauntless three had been kept in solitary confinement for a week before and after the inoculation.—*W. T. Belfield in Chicago Medical Journal and Examiner.*

EARTH-WORMS.—In his work on worms, Darwin has described some tower-like dejections which he never saw constructed in England, but which are attributed to an exotic species of *Pericheta*, from Eastern Asia, naturalised in the environs of Nice. We learn from *Nature* that M. Trouessart has lately observed similar dejections, in gardens near Angers. Having collected a large number of worms from where the towers were made, he found no species of *Pericheta*, nor of any other exotic genus. In two or three cases he surprised the worms at work, and they were *Lumbricus agricola*. It was the anterior part of the body that was lodged in the tower. After the rainy period at the end of September all the tubular interior of each tower (forming a continuation of the subterranean gallery) was quite free; but a few days later it was obstructed by recent dejections. M. Trouessart supposes that, the calotte or cap of the tower becoming hard in air, a time comes when the worm can no longer burst the upper wall as before, to place its dejections outside (so increasing the height of the tower), but deposits them within. Thus a long period of rain is necessary for these towers to rise regularly. The towers probably serve to protect the galleries from rain, and to afford a breathing place for the worms, where they are not seen by birds.

UNIVERSITY OF EDINBURGH.—The following gentlemen have passed the first professional examination, October 1882:—William Anderson, William A. Anderson, Edmund Antrobus, John Bardgett, T. W. Barraclough, Georges Baschet, William J. Bell, Charles Bennett, Reginald Bowman, Joao Francisco Braga, J. D. Broadfoot, Harbit Brown, R. F. Burt, Ernest Kenneth Campbell, David Cassels, Ernest James Cheetham, Stephen Frazer Clark, Frank Gerard Clewom, Frederick William Collinson, Robert Swan Coulthard, James Cunningham, George Scott Davidson, Joseph Wm. Dawes, John Henry Deamer, Kenneth Mackinnon Douglas, David Somerville Doughty, J. J. Drinkwater, Walter Musgrave Eaton, Ahmed Fahmy, Peter Fraser, Edwin Sargood Fry (with distinction), John Garvie, William Gregory Gibson (with distinction), James Gray Glover, Robert Gordon, J. W. Grant, Alexander M. Gray, Allen Edward Lambton Gray, David Campbell Gray, David Middleton Greig, Thomas Howard Griffith, Joseph Griffiths, George Lovell Gulland, Charles Robert Hailes, Joshua Jacobus Hoffman, Robert Wilberforce Inkster, Samuel Baker Jones, Robert Conwy Joyce, H. L. St. P. Keelan, Frederick Truby King (with distinction), Ernest Cory Kingdon, John Charles Lamont (with distinction), John Dickenson Leigh, Charles Lewis Lempriere, Charles James Lewis, Edward Linton, William G. Little, James Richardson, Thomas Logan, A. L. B. Loubser, Wilton Wood Russell Love, Donald Campbell Archibald M'Allum, Duncan M'Diarmid, J. R. M'Givin, George Donald Macintosh, John M'Jerrow, Francis Wallace Mackenzie, Wm. Henry M'Lean, Robert MacLelland, John M'Donald MacLennan, Robert Charlie MacWatt, Daniel Groves Marshall, Charles G. Matthew, David Macleish Moir, David Morgan, Thomas Morris, Robert S. Morrison, Charles James Morton, John Kemp Murray, Andrew W. Nash, William Ramsay Nasmyth, F. A. Neal, John M'Donald Nicoll, Maurice Paterson, John Pirie, George Porter, Edward Thomas Pritchard, Trevor John Pritchard, Selwyn Hall Puckle, James Reid, Francis Mortimer Reynolds, J. B. Ridley, John Richards, Ernest Robertson, Ernest Theophilus Roberts, Frederick Chas. Roberts, Hugh L. Roberts, Arthur MacLeod Ross, John Ross, D. Wilson Scotland, Gerard Affleck Scott, W. E. S. Scott, Harold Scurfield, Robert William Smeddle, George Purves Smith, John William Smith, George Laird Somerville, Gabriel H. Steyn, Robert Steward, Robert Stirling, William George Sym, Charles C. Teacher, Caleb Terry, John Bolon Thackwell, William James Thomas, Francis Courtenay Thorp, John William Travell, Ernest B. Turner, J. C. S. Vaughan, Quintin Macadam Wallace, John Warnock, Clarence Henry Waters, Adam D. Wilson.

The London Medical Record.

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ROSSBACH ON COUGH AND EXPECTORATION.*

IN the first of the articles mentioned below, Dr. M. J. Rossbach, after commenting on the feebleness of our knowledge of the secretion of mucus along the respiratory tract, and of the effects of the various remedies on abnormal states of secretion from mucous membranes, relates his experiments on the exposed trachea, chiefly made on cats. Normally, there is a thin layer of mucus on the mucous membrane, which does not disappear when a great deal of ordinary air passes over it. When this mucus is dried up by blotting paper, it re-forms in from half a minute to two minutes, but never in such quantities as to flow off or appear in drops. Rossbach concludes from this that the mucous glands of the bronchial mucous membrane do not constantly secrete, but only when (through the evaporation of the mucous layer) the external stimulant is able to affect the mucous membrane. It is probable that the mucus is not all passed out at once; the mucin is first secreted, and then comes a flow of watery alkaline fluid, which holds the mucin in solution. Continuous stimulation (by constant drying, by dusting the mucous membrane with some powder) always produces fresh quantities of secretion. The excretion was alkaline; it contained mucin, but no formed elements, nor anything corresponding to ptyalin. It is pointed out that the respiratory tract must be kept continually moist, and must be protected from inflammation, so that just the necessary amount of fluid shall be secreted, and no more. Foreign substances (dust, pathogenic organisms) must be carefully excluded. The secretion is quite independent of, or only very slightly dependent on, sensory nervous stimulation; at all events, the flow goes on quite as well when all external nervous influences are withdrawn. On the other hand, both laryngeal nerves contain vaso-motor fibres, and there is a certain relationship between secretion and vascular fulness.

The experiments on the effect of cold on the tracheal mucous membrane are interesting. The bodies of animals were first subjected to a hot poultice, and then suddenly an ice-bag was substituted. Half a minute after the application of the ice-bag, the whole of the respiratory mucous membrane, including the larynx, became quite white, owing to vascular spasm. After one or two minutes, the spasm gradually relaxed, and in its greatest degree the colour was a deep blue-red. Such a quantity of watery secretion occurred, that it flowed off. On taking off the ice and replacing the poultice, the blue-red soon gave way to a more red colour. A fresh application of ice recalled the vascular spasm; but this time it was more tardy and less marked. These phenomena are regarded as of reflex me-

chanism. Rossbach found that the action of alkalies (after their entrance into the blood) was to diminish and finally to dry up the secretion from the tracheal mucous membrane (contrary to the usual doctrine). The same effect is believed to hold good for men using alkaline waters.

In the direct application of alkalies (as by inhalation), Rossbach observed no effect. Weak solutions of potash or acetic acid, applied directly to the mucous membrane, caused strong hyperæmia and increased secretion. Astringents (tannin, alumen, nitrate of silver to 4 per cent.) brought about an opacity of epithelium, with total cessation of secretion. Observations on the mucous membrane and its vessels were not possible in this cloudy state of epithelium. Air passed through oil of turpentine and on to the mucous membrane gradually determined an absence of secretion, but this gave way when the blast of air and turpentine was stopped. A watery solution of the oil of turpentine increased the secretion, whilst the vessels became constricted; therefore, this medicament is of great practical value, for, whilst diminishing hyperæmia, it increases the fluidity of the sputa; and, besides, it has an antiseptic influence on decomposing mucus.

Apomorphia, emetin (ipecacuanha), and pilocarpin increase the secretion. These three agents are expectorants *par excellence*. Practically, Rossbach believes that apomorphia is the best, as producing least nausea and anorexia. The strongest (pilocarpin), owing to its action on the salivary and sweat-glands, as well as its effect on the heart, is not recommended. Rossbach has not had sufficient experience of emetin, although the action of ipecacuanha is well known. Atropin and its related alkaloids are just the antitheses of the above. The narcotic influence of atropin was found to be very uncertain.

Under the use of morphia, it was observed once that there was a considerable decrease in the secretion (to about one-fifth of the normal amount), as well as great diminution in coughing. A complete cessation of secretion was not produced by morphia. Experiments on animals and in practice were made on the joint action of morphia and apomorphia with favourable results.

1. Hydrochlorate of apomorphia may be used as an expectorant; the best prescription is: *R.* Hydrochlorate of apomorphia, 3 to 5 centigrammes (about 0.45 to 0.75 gr.); dilute hydrochloric acid, 5 cubic centimètres; distilled water, 150 cubic centimètres. Keep in a black glass bottle. The dose is one tablespoonful every two hours.

2. The combination of apomorphia and morphia lessens the frequency of cough and increases the fluidity of the sputa: *R.* Hydrochlorate of morphia, hydrochlorate of apomorphia, of each 3 centigrammes; dilute hydrochloric acid, half a gramme; distilled water, 150 grammes. One tablespoonful is given every two or four hours.

3. Morphia and atropin must be made up separately, as follows: Hydrochlorate of morphia, 2 to 5 centigrammes; distilled water, 120 grammes; red syrup, 30 grammes. The dose is one tablespoonful every two to four hours. *R.* Sulphate of atropia, half a milligramme (about 1-150 grain); liquorice powder and juice, enough to make twenty pills. One, two, or three pills are to be taken every night. These pills of atropin are best given in the evening from six to ten o'clock, at intervals of two hours, simultaneously with one or two spoonful of the morphia solution; only the morphia to be given during the day should the cough indicate it. This joint action

* Ueber die Schleimbildung und die Behandlung der Schleimhauterkrankungen in den Luftwegen.—Ueber die Behandlung des Hustens und Schleimauswurfs. (*Berl. Klin. Woch.*, Nos. 19 and 20, 1882.)—Nachtrag zur Behandlung des Hustens und Schleimauswurfs. (*Ibid.*, No. 27, 1882.)

is recommended in catarrh, emphysema, and phthisis with abundant sputa (when, in the last, this does not come from cavities). ANGEL MONEY, M.D.

FÉRÉ ON HEREDITARY ATAXY, FRIEDREICH'S DISEASE, DIFFUSE SCLEROSIS OF THE SPINAL CORD AND MEDULLA OBLONGATA.

THE expression, hereditary ataxy (*Le Progrès Méd.*, November 1882), has introduced a regrettable confusion into the pathology of the nervous system. If, for example, we understand this term in the modern sense which it has acquired since the labours of Friedreich* it is not applicable to the disease designated; for, as we shall see, it refers to progressive locomotor ataxy. If, on the other hand, it would indicate that this form of degeneration is specially hereditary, it is very inapt, because the ataxy of Duchenne is also frequently directly inherited, though more frequently the inheritance is the neuropathic disposition. M. Charcot has specially insisted on this point in the etiology of tabes. But in this disease the adjective hereditary might be advantageously replaced by that of family, as it is specially liable to occur in several children of the same family. The expression hereditary ataxy being manifestly improper, it may be provisionally described as Friedreich's disease.† Friedreich's disease has been considered a disease of puberty, but it may be developed in early infancy. Two cases quoted by Hammond died at 3 years of age; it is also seen in adolescence, after 20. Contrary to Friedreich's opinion, it is more common in the male sex. Friedreich describes nine cases; Carré‡ 1, Schmid§ 2, Brousse I, Hammond 12, Quincke|| 2, Carpenter¶ 2, Kellogg** 2, Gowers†† 5, Seeligmüller 2; making 38 cases actually known, of which 22 are boys and 16 girls. The occurrence in several children of the same family indicates a hereditary weakness or arrest of development of the spinal cord‡‡. The occasioning causes are still undetermined.

The affection usually commences without prodromata by the appearance of special weakness in one of the lower limbs, and even often in both. Alterations of sensation are rare at this stage. Walking becomes uncertain, without presenting quite the characters of in-coordination of tabes; the patients walk, as Hammond says, with their legs apart and as if drunk.§§ Little by little the erect position becomes impossible, but in some cases this seems to be as much the result of true paralysis as of inco-ordination.

The weakness and uncertainty of movement spread rapidly to the upper extremities, shown at

first by slight tremblings; sometimes the affection appears at first in the hemiplegic form. Generally inco-ordination is not increased by closing the eyes, and is only shown in the performance of voluntary movements. Later on, the trunk and head move irregularly; the head oscillates like that of a person asleep in a chair; these oscillations increase when the patient moves, and stop when he is immobilised by some support. After some years the tongue participates in the trembling, speech becomes hesitating, and ends by being unintelligible; there are sometimes complete attacks of glossoplegia (Brousse). The muscles of the eye are also invaded; there is frequently nystagmus, ordinarily in the horizontal axis, and when the eyes are voluntarily moved.* Ultimately there is more or less complete paralysis of all four extremities, often with atrophy; then also there may be cramps and temporary contractures.

It is rarely, except at this period, that troubles of sensibility appear, chiefly in shape of anæsthesia of the lower limbs. Sometimes there are pains, but rather wandering than lightning or darting.

Electro-muscular sensibility appears to diminish with the cutaneous and articular sensibility. The reflex sensation persists, while the sphincters are more affected. Patellar reflex generally persists, and is sometimes even exaggerated. The special senses are intact. There are never any bedsores. Intelligence is unaffected; but there is often vertigo, noticed by Friedreich, which comes on suddenly in any position of the patient; and there are apoplectiform attacks, recurring some time before death, and which carried off M. Grasset's patient, 'characterised by a rapid but incomplete loss of consciousness, by resolution of the limbs, general anæsthesia, considerable difficulty in breathing, which was jerking and noisy, by tumultuous action of the heart, great frequency of the pulse (130), and increase of temperature (102.2 deg.)' (Brousse).

In men there is nearly always impotence, and in women menstruation is irregular and deranged. The progress of the disease is slow and fatally progressive. Its duration cannot yet be determined. Coleman's two children died after three years, but it may last eight to thirty years.

Whilst Topinard†, Carré, Möbius‡, Erb§, Grasset||, agree with Friedreich in regarding it as a form of locomotor ataxy, Charcot and Bourneville¶ have expressed the opinion that in some cases at least, it is the result of disseminated sclerosis, an opinion not contradicted by some of the necropsies. In fact, it occupies an intermediate position between these two conditions, partaking of the characters of both, but differing from each.

Friedreich's disease comes on ordinarily after the first dentition, a character unlike tabes, though that, no doubt, does occur at an earlier age than was formerly believed. In the symptoms of Friedreich's disease, sensory troubles are almost entirely absent, while in tabes these are constant and early, in the form of lightning pains, patches of hyperæsthesia and anæsthesia, numbness of the feet, arms, etc.

* Ueber Degenerativ Atrophie der Spinalen Hinterstränge (Virchow's Archiv, Band xxvi, pp. 391, 433, and Band xxvii, x.) Ueber Ataxie mit besonderer Berücksichtigung der Hereditären Formen (Virchow's Archiv, Band lxxvii, p. 145, Band lxx, p. 140.)

† BROUSSE.—*De l'Ataxie Héritaire (Maladie de Friedreich)*, Paris, 1882.

‡ CARRÉ.—*Nouvelles Rech. sur l'Ataxie Locom. Progress.* Paris, 1865.

§ SCHMID.—Ueber Hereditäre Ataxie. (*Correspondenz-Blatt für Schweizer Ärzte*, 1881, p. 97.)

|| Quoted by Friedreich.

¶ Quoted by Gowers.

** KELLOGG.—Two Cases of Locomotor Ataxy in Children. (*Arch. of Elect. and Neurology*, 1875, vol. ii, p. 182.)

†† GOWERS.—*Trans. of the Clinical Society of London*, 1880, p. 1.

‡‡ KAHLER AND PICK.—*Arch. für Psych. und Nervenkr.*, Band viii, p. 251.

§§ HAMMOND.—On the so-called Family or Hereditary form of Locomotor Ataxia. (*Journal of Nervous and Mental Diseases*, New York, 1882, p. 484.)

* SEELIGMÜLLER.—Hereditäre Ataxie mit Nystagmus. *Arch. für Psych. und Nervenkr.*, Band x. (*Handbook der Kinderkr.* Herausgegeben von C. Gerhardt, fünfter Band, vierte Abtheil, Zweite Hefte, 1871.)

† TOPINARD.—*De l'Ataxie Locomotive*. Paris, 1874, p. 369.

‡ MÖBIUS.—Ueber die Hereditäre Nervenkrankheiten (Volkmann's Sammlung Klinischer Vorträge, 1879.)

§ ERB.—*Ziemssen*, vol. xi, p. 601.

|| GRASSET.—*Traité Pratique des Maladies du Système Nerveux*, 2nd ed., p. 321.

¶ BOURNEVILLE.—*Nouvelle Etude sur quelques points de la Sclérose en Plaques*, 1869, p. 212.

Affections of sight and hearing are also far from rare in true tabes. Whilst oculo-pupillary derangements, motor paralysis of the eye, and disorders of micturition are wanting in Friedreich's disease, they are rarely absent in tabes. The movements of the trunk and nystagmus scarcely are seen in true ataxy. Disorders of speech are not met with in ordinary tabes. As to Erb's sign, it fails here sometimes as in the classic form, in which the patellar reflex may not only be present but exaggerated.* Finally, there are never any bed-sores in Friedreich's disease.

When we compare the disease we are now discussing with disseminated sclerosis, we find fewer differences. The latter, also, may develop after the first dentition; both diseases agree in the absence of sensory and sensorial disorders, and in the disturbance of speech, vertigo, the integrity of the sphincters, etc. Disseminated sclerosis is distinguished by the tremor, which differs from the uncertainty of hereditary ataxy. It is distinguished also by the spasmodic character of the gait, by the exaggeration of the tendon-reflexes, by the contractures which are exceptional in the other affection, by the frequency of strabismus or diplopia, and by the intellectual troubles, which are completely absent in Friedreich's disease.

Clinically, therefore, this disease forms a distinct class. Let us see whether pathological anatomy will confirm this autonomy. Besides the common changes of chronic spinal meningitis, various changes are found in the spinal cord and medulla. The columns of Goll are much affected, but the columns of Burdach are also, notably in its exterior fasciculus. The sclerosis appears less pronounced in the dorsal region than in the lumbar and cervical parts, and it is in the lumbar part that it is most marked. It was only in Friedreich's first necropsy that the posterior columns alone were found affected; may not the investigation have been imperfect? In all other cases, the lateral columns have been involved also, and in many the lesion has extended in an irregular manner to the anterior columns. The columns of Clarke may also be affected (Brousse); and in one case lacunar spaces were found in the grey matter. Schultze has observed a diminution in the size of the cord taken as a whole. The same state of things exists in the medulla, where the sclerosis may be seen passing into the posterior pyramid and towards the floor of the fourth ventricle, reaching the nucleus of the hypoglossal. The posterior roots are ordinarily atrophied and indurated; the hypoglossal, the brachial, crural, and sciatic nerves may be more or less atrophied. Thus, from this point of view, too, hereditary ataxy differs from the classical locomotor ataxy.

Instead of a systematic lesion, generally limited exclusively to the posterior columns, we have to do with a combined sclerosis of the different columns of the cord, predominating, it is true, in the posterior cords, but rapidly invading the others; it is a diffuse sclerosis of the cord and medulla. Its clinical analogies with disseminated sclerosis are explained by the distribution of the lesions.

According to Friedreich, the lesion commences in the posterior columns, and is spread by the posterior meningitis, which accounts for the predominance of the lesion at the periphery; but it is sometimes most marked around the central canal (Brousse). Sometimes the lesions in the medulla oblongata are very advanced, and Hammond thinks the disease com-

mences there. This author is disposed to believe that there is some affection of the cerebellum, which accounts for the vertigo, nystagmus, peculiar gait, and pain in the back of the head, of which many patients complain.

We may compare with this the combined sclerosis of the posterior and lateral columns described by Prévost,* the cases of sclerosis of the posterior columns coinciding with degeneration in foci of the cord observed by Westphal† and Schultze‡; but these facts, which are anatomically identical, differ also clinically from Friedreich's disease.

ROBERT SAUNDBY, M.D.

CHANDLER ON NERVE-STRETCHING.

AS a termination to a paper on the value of nerve-stretching as a mode of treatment (*New York Med. Rec.*, Sept. 9th, 1882), Dr. Chandler appends tables relating to no fewer than 416 cases collated from the practice of European and American surgeons, a large enough number to allow the formation of a proximate judgment on the subject. As will be seen, they fully bear out the opinion now generally held, that nerve-stretching is an exceedingly valuable remedy in cases of obstinate neuralgia and some spasmodic affections, but of very questionable benefit in cases of central disease.

Of the whole number of cases operated on, we find that 164 were cured (39.4 per cent.), 135 underwent improvement (32.4 per cent.) This includes 21 cases of central disease, reported as slightly improved, and in 117 cases (28.1 per cent.) the operation failed completely; in two of these, the condition for the relief of which it was performed was aggravated.

The tables are, however, so arranged as to allow an estimate to be made of the success of the practice in its special applications.

Table A contains cases of neuralgia only, being sub-divided into four categories.—1. sciatica; 2. traumatic neuralgia; 3. neuralgia of the fifth nerve; 4. miscellaneous neuralgic affections. The total number of cases included is 180; and of these, 121 (67.2 per cent.) are reported as cures, 18 (10 per cent.) as improved, and 41 (22.7 per cent.) as failures.

The figures in this section are somewhat depressed by the inclusion of 37 cases of neuralgia of the fifth nerve, and these are further complicated by the fact that in 7 the nerve was both stretched and excised. The most uncomplicated and best are obtainable from section 1, including cases of sciatica only; here we have 94 cases (adding 24 of Nussbaum's from the appendix), with 74 cures (78.7 per cent.), 9 improvements (9.5 per cent.), and 12 failures (12.7 per cent.) These cases were many of them of old standing, varying in duration from three months to many years.

Table B relates to cases of spasmodic affections, and is divided into two sections: 1. mimic spasms; 1. torticollis, etc. The results here also are remarkably good. Thus, of 27 cases, 19 (70 per cent.) underwent cure; 2 (7.4 per cent.) improved, and 6 (22.2 per cent.) only failed. In this case, again, however, the results are somewhat interfered with, by the fact that in 5 cases, in which the spinal accessory was stretched, a portion was also excised.

* PRÉVOST.—*Arch. de Phys. Norm. et Path.*, 1877, p. 764.

† WESTPHAL.—*Arch. für Psych. und Nervenkrankheiten*, Band ix, Heft 2, p. 389.

‡ SCHULTZE.—*Virchow's Archiv.*, Band lxxix, p. 132.

* THIRME.—*De la Conservation des Reflexes Tendineux dans l'Ataxie Locomotrice*, 1881.

Tables C and E contain so few cases as to be of little statistical value. C contains 5 cases of contracture with 2 cures (40 per cent.), and 3 failures (60 per cent.); and E, 4 cases of epilepsy, with one cure. To this table, however, may be added 11 cases of reflex epilepsy, reported in the appendix by Nussbaum, all successful, which gives 15 cases with twelve cures (80 per cent.), and three failures (20 per cent.), one of the latter being reported as improved, and the other two as relieved.

Table D, peripheral paralysis, is of special interest as containing the results of 33 case of nerve-stretching in anæsthetic leprosy, in all of which sensation returned soon after the operation, and muscular strength was regained. This table includes 39 cases, with 1 cure (2.5 per cent.), 36 improvements (92.3 per cent.), and failures (5.1 per cent.) These latter were cases of infantile paralysis.

Table F contains (together with Nussbaum's) 92 cases of central disease, in which nerve-stretching was resorted to. The number is made up by locomotor ataxy, 67; diseases of nervous centres, unspecified, 9; paralysis agitans, 1; lateral sclerosis, 2; anterior sclerosis, 1; multiple sclerosis, 1; atetosis, 1; hemiplegia with contractures, 2; myelitis, 4; cancer of spinal cord, 1; injury to spinal canal and cord, 1; spastic spinal paralysis, 1. The special interest in this table depends on the large number of cases of *tabes dorsalis* included. Of these, 37 (55 per cent.) are reported as improved; 17 (25.1 per cent.) as slightly or temporarily improved, 10 (14.9 per cent.) as failures—1 as an aggravated failure, and 3 (4.4 per cent.) died—1 from a cause not given, 1 from chloroform, and 1 from thrombosis and multiple embolism. All the observers agree in allowing the improvement with regard to the lightning-pains, but the girdle-pains were, as a rule, unaffected. The only cases in which any details are given, are 8 by Dr. Mikulicz of Vienna; in these, the ataxy symptoms were unchanged in 5 cases; once there was slight improvement, and twice the ataxia was increased. Sensation was not improved in 4 cases; in 2 there was temporary improvement; and in 2 improvement persisted over three months. The symptoms referable to the bladder and rectum were, in 2 cases, improved; in 1 case impotency was removed, and in 1 case paralysis of the bladder supervened upon the stretching. In all the cases, the lightning-pains were relieved for a longer or shorter time. A point of interest is recorded regarding a patient of Sonnenberg's, in whom a relapse as to lightning and girdle pains took place five weeks after stretching the sciatic nerve; the patient then fell and fractured his patella, and the accident was followed by a similar temporary remission of the pains.

Table G contains 50 cases of traumatic tetanus, with 9 (18 per cent.) cures, 3 (6 per cent.) improvements, and 38 (76 per cent.) failures. Two of the successful cases are complicated by the fact that Calabar bean was also given, ostensibly without effect.

Table H contains 8 cases of stretching of the optic nerve for neuritis; in 2 of which the neuritis is said to have slightly improved.

Sufficient details are not given to afford material for any general consideration, except as to results; but some points of interest are included under the head of remarks. First, as to the condition of the nerves stretched; the absence of any observations as to their appearance leads us to conclude in most cases they were, at any rate, microscopically normal.

The cases in which any morbid appearances are mentioned, are 4 of neuralgia from table A; 2 of sciatica, in 1 of which the nerve is described as in a state of 'fatty degeneration', and in the other a small neuroma was removed; a case of traumatic neuralgia, in which extravasated blood was found within the sheath of the posterior tibial nerve, and another in which the sheath of the occipitalis major was found thickened and injected. In one case of anæsthetic leprosy the right ulnar nerve was thickened, and three times its normal size, while the left was thickened, but not uniformly; and, lastly, the sciatic nerve, in a case of paralysis agitans, is spoken of as dirty brown in colour, hard, and creaking under 40 lbs. traction.

As to the operation itself and its consequences, in 6 cases of sciatica it had to be repeated, and was then successful; and, in some of the other cases, a second operation was needful. The complications in such a large number of cases, if all stated, seem very insignificant, in comparison with the gravity of the operations. In two cases the wound is said to have suppurated; in one where the sciatic was stretched in the popliteal space, secondary hæmorrhage from the popliteal artery occurred; in a third, thrombosis of the popliteal vein was followed by multiple embolism and death; and, in a fourth, death resulted from entrance of air into the venous system. Three other deaths are recorded; one from shock in a case of multiple sclerosis where both sciatics were stretched, one from chloroform, and one from a cause not given. No mention is made here, of course, of the fatal cases of tetanus in which nerve-stretching was resorted to.

The only other ill consequences spoken of were dependent on the injury to the nervous system itself. Thus, in many cases, the temporary paralysis and anæsthesia resulting were very persistent, lasting as long as three months; in a case of sciatica, paralysis of the sphincter ani and anal region followed; and in another, of *tabes dorsalis*, paralysis of the bladder; in a case of myelitis, due to Pott's disease, the nervous symptoms were aggravated by stretching the sciatic, and this also occurred in one of the cases of *tabes* in which the sciatic nerve was stretched. Lastly, it may be mentioned that in one of the cases of anæsthetic leprosy the ulnar nerve gave way, but subsequently healed without the persistence of any lesion.

The nerve stretched is not in all cases given, but as far as can be calculated the numbers were as follows:—sciatic 179 (in 30 cases both nerves were stretched); internal popliteal 1; peroneal 3; posterior tibial 6; anterior crural 9 (in 4 both nerves); external spermatic 1; brachial plexus 24; median nerve 21; ulnar 19; musculo-spiral 4; radial 4; digital nerves 2; intercostals 2; great occipital 1; optic nerve 8; fifth nerve, first division 12; second division 12; third division 5; facial nerve 15; spinal accessory 10.

G. H. MAKINS.

OBERST ON LACERATION OF THE URETHRA.

DR. MAX OBERST of Halle, in a published lecture on the 'Treatment of Laceration of the Urethra in the Male' (Volkmann's *Sammlung Klinischer Vorträge*, No. 210), states that this injury, if properly treated, and if a free outlet be provided for the urine and effusion from the internal wound, need seldom ex-

cite serious apprehension; but, on the other hand, if not judiciously dealt with, it will, in many instances threaten the life of the patient, and impair the future functional capacity of the injured organ. Laceration of the urethra involving the membranous or bulbous portions of the urethra, or, less frequently, its vesical extremity, is usually caused either by direct violence applied to the perinæum, or by a displaced portion of a fractured pelvis. The wound may involve only a portion of the circumference of the urethra, or the canal may be torn through, and its continuity completely destroyed. In opposition to Gosselin, who holds that the laceration complicating fracture of the pelvis is usually incomplete, Dr. Oberst asserts that, in cases of this kind, the urethra is always completely divided. It is also held by Dr. Oberst that, in cases of incomplete laceration of the urethra, the small transverse wound is situated in the inferior (posterior) wall of the canal, and not, as has been stated by Poncet and Ollier, on the upper (anterior) wall.

In decided cases of partial laceration of the urethra, and in cases, also, where there may be a suspicion of the occurrence of such injury, it is decidedly indicated, Dr. Oberst states, to pass a large catheter into the bladder, and to allow this instrument to remain for some days. As the wound is almost always situated in the lower (posterior) wall of the urethra, the surgeon, in introducing the catheter, should keep its point as much as possible against the upper wall. By the early introduction of a catheter, urinary infiltration and its results may be effectually prevented. Suppuration, it is true, usually occurs at the seat of injury, in consequence of contusion, and probably by the destruction of some portion of tissue through the severity of the injury. Abscesses thus formed have not, it is stated, any serious import, and, as a rule, heal speedily after they have been incised. Dr. Oberst suggests that, in consideration of the almost constant occurrence of such abscesses after partial laceration, it might be advisable always to open the recent swelling of effusion in the perinæum, and to disinfect the seat of injury. The subsequent formation of a stricture in cases of partial laceration can be prevented only by long perseverance in the repeated use of the catheter.

Complete laceration, Dr. Oberst states, is more frequently met with than the former and less extensive injury. When presented in connection with broken pelvis, this fracture is usually of the variety known as the annular, or double vertical fracture, the solution of continuity involving the pelvis both in front and behind. In front, the framework of the foramen ovale is fractured—the horizontal ramus of the os pubis on one hand, and its descending ramus, or the ascending ramus of the ischium, on the other; and behind, either the sacro-iliac synchondrosis is separated, or there is a longitudinal fracture involving the posterior part of the ilium or the lateral part of the sacrum. In the production of an annular fracture of the pelvis, very considerable violence is always exerted. The action of a heavy falling body, a fall from a great height, or a crush between the buffers of two railway carriages, are the usual causes of such injury. The force in cases of this fracture, in Dr. Oberst's opinion, acts not in a direction from before backwards, as is stated in many text-books, but in such a way as to compress the pelvis laterally. The primary object of the treatment of complete division of the urethra is to establish a free discharge for the urine. The sur-

geon has also to bear in mind the necessity of preventing septic infection, and must ultimately endeavour to restore the normal course of the urethral canal. Prolonged attempts to pass a catheter into the bladder should be avoided, as with every attempt more hæmorrhage is apt to be set up, and there is increased risk of infective germs being carried into the wound by the instrument. The catheter should be used only for confirming the diagnosis, and to assist the surgeon, if it be necessary to resort to an operation. Suprapubic puncture of the bladder, which has been advocated by many French surgeons, can be regarded only as a palliative course of treatment, as it does not remove the necessity of further operative treatment for the restoration of the course of the urethral canal. Moreover, it affords no protection against infection of the deep-seated wound in the perinæum, and the operation is not free from danger. In the surgical practice at Halle, a free incision is made into the perinæum under antiseptic precautions, the wound is carefully disinfected by a solution of carbolic acid, a full-sized silver catheter is passed into the bladder from the perinæum and through the proximal fragment of the urethra, and the wound is then drained and tightly plugged and covered by antiseptic dressings. To the free protruding extremity of the catheter a long elastic tube is fixed, through which urine may flow away. Dr. Oberst states that he has never experienced any difficulty in finding the end of the proximal urethral fragment. This end may be recognised in the large perineal wound as a small protrusion resembling a firm blood-clot, or a small bleeding protrusion. In case of difficulty, this extremity may be made out on pressing over the bladder, so as to force some urine into the wound. Dr. Oberst states that the subsequent course of a case thus treated is usually very favourable, even when there has been extensive laceration of the soft parts and considerable displacement into the large wound of fragments of the pelvic bones. There is seldom any suppuration, and the patient usually recovers without incurring any septic dangers. The silver catheter should be replaced after an interval of two or three days by a Nélaton's soft catheter passed along the whole course of the urethra. After a further interval of from six to ten days, this may be removed, and a metallic catheter or sound be subsequently introduced every day during five or six weeks. In order to prevent stricture, the patient after recovery should himself continue the use of the catheter at increasing intervals for at least twelve months. The prolonged retention of a large catheter during the early stages of the treatment of urethral laceration is very liable to cause vesical catarrh; but this usually soon ceases after the removal of the instrument, and does not become severe if precaution be taken to use a catheter that is quite clean, and if a weak solution of salicylic acid be carefully injected into the bladder, and this agent be also given internally in small doses. For complete laceration of the urethra near the neck of the bladder, a similar plan of treatment is recommended. In cases of this kind, however, it is often found impossible to make out the proximal opening of the divided canal, and it then becomes necessary to have recourse to further means for establishing a free discharge for urine, and of facilitating subsequent attempts to restore the urethral canal. The proceeding advocated by Dr. Oberst is that of posterior catheterism, which consists in suprapubic puncture of the bladder, and in passing a catheter into the urethra from its vesical orifice. A case is

reported in which Volkmann, who was the first surgeon to apply this treatment, thus dealt successfully with a complete laceration of the urethra of two days' standing.

W. JOHNSON SMITH.

HAAB ON CORTEX-HEMIOPIA.

DR. HAAB (*Klin. Monatsbl. für Augenh.*, May 1882) brings forward two very striking cases to prove the relation between lesions of a definite area of the cortex of the occipital lobe and homonymous hemiopia. Such observations are most important as enabling us to localise the cortical optic centre, and to determine the retinal area in connection with each such centre. Again, if we can establish the fact that destruction of a particular cortical area in one occipital lobe causes loss of function of the corresponding half of each retina, we go far to overthrow the arrangement given in Charcot's chart. According to the latter, the optic fibres that do not cross in the commissure do so further back, so that the whole of one retina has its centre on the opposite side of the brain.

The two patients died about the same time, the one under the care of Professor Huguenin, the other under that of Dr. Haab; and the *post mortem* examination of each was made independently by their respective physicians. On account of the importance of the cases, we give them at some length.

CASE I (Huguenin). The patient was a girl aged 8, living in bad hygienic circumstances. There was a family history of tubercle. She grew slowly, and remained small and thin, but always had a disproportionately large head. Intelligence was feeble. At the age of 6 she had a suppurating gland in the neck, which discharged for about eight months. In November 1878 she had whooping-cough, lasting for three months. In Jan. 1879 she had enlarged cervical glands on both sides, but no suppuration. About this time her conduct became peculiar and absent. She had failure of memory and bad temper. Headaches now occurred, at first once or twice daily, but becoming more and more frequent, and finally constant, with occasional acute exacerbations at night. She was prone to outbursts of passion on slight provocation. Sleep was bad and broken. Her appetite was very good, and remained so almost till death. In February, frequent vomiting commenced, especially on coming into bright sunlight. The bowels were fairly regular. Movements, sight, etc., were good. She was dull and listless, except on the occurrence of headache, when movements were excited. At the end of March, convulsions appeared, and afterwards continued a prominent symptom, occurring once every three or four days. They occurred if the child fell into a passion or was agitated; then she shrieked out, became blue in the face, fell down, and convulsions began on each side of the face in the region of the portio dura. Consciousness was lost. The eyeballs were in a strained position towards one or other side (there was no constancy in this), and exhibited tremulous nystagmus-like movements. Next, both arms were convulsed, and then the legs. During this time (two to three minutes) there was inspiratory spasm with swelling of the neck, and cyanosis, now and then interrupted by a prolonged snoring inspiration. For about half an hour she remained unconscious, during which time similar convulsive attacks recurred at intervals; then there was a gradual return of consciousness. Mental weakness now progressed rapidly. She was not

under treatment till April, when Dr. Huguenin first saw her.

On April 6, 1879, her condition was as follows. She was a slightly built child, with very large head, but without real deformity. The sutures were all closed; the bones seemed very solid and thick; the forehead was prominent; the expression was silly; she had a tendency to sob and scream; she was unwilling to leave the sitting position. There were enlarged glands in the neck, and also in the right supraclavicular fossa. When spoken to, she seemed to understand, but gave no answer; yet she could speak quite well at times. There was no paralysis, but the movements of all the muscles were weak. There was no hemiparesis; no strabismus nor ptosis. The pupils were equal, of medium size, and active. The portio dura and hypoglossal nerve were normal. Deglutition, etc., were normal. Reflex action was very active all over the body. There were no vaso-motor or trophic disturbances; no anæsthesia anywhere. She screamed violently on slight interference. Sight, hearing, and taste were perfect. Smell was doubtful. On ophthalmoscopic examination, both discs were found normal; no swelling. The rest of the fundus was normal. The heart, lungs, and abdominal viscera were apparently sound. The urine contained no albumen nor sugar. The diagnosis was, hydrocephalus from unknown cause. The treatment consisted of iodide of potassium and syrup of the iodide of iron.

Headache now became less severe, and she was more affable. Intelligence improved. On April 27th, a second ophthalmoscopic examination showed no engorgement (Stauungs-papilla) on either side; but both discs were red and elevated; their outline was indistinct (optic neuritis). During part of May, improvement was most satisfactory. The convulsions occurred about once every ten days, and were fewer at a time.

In the middle of May, her mother noticed that she began to hold her head constantly somewhat awry, *e.g.*, she always looked at her toys and picture-book as if 'round the corner'. On May 20, there was found to be hemiopia, and failure of the right half of both retinæ, so that she always carried her head towards the left. This symptom remained constant till death. From May 20 onwards, the headaches became worse, with sleeplessness and much vomiting. There was no constipation. The appetite was good. Convulsions increased again, and, at the end of May, occurred almost daily. Intelligence again failed rapidly. There was no failure of movement or sensation except the hemiopia. In June, she died of bronchopneumonia.

A *post mortem* examination of the head only was allowed. The bones of the skull were thick. The membranes on the convexity of the brain were healthy. The brain was large and bulky, with slight congestion of the fine vessels of the pia mater, especially the veins. The longitudinal sinus contained a fresh clot. On the outside of the brain two tumours were seen: one at the apex of the left frontal lobe, the other at the apex of the right occipital lobe. The base was normal. All the nerves were intact. Round the optic commissure, extending to the anterior edge of the pons Varolii, and in both Sylvian fissures, there was slight thickening of the pia mater, of a chronic inflammatory nature. No swellings were found on the course of the optic nerves. The cerebellum and medulla oblongata externally were healthy. All the ventricles were much enlarged; the choroidal plexus was firm and bulky; there were granulations on the

ependyma at the head of the corpus striatum and in the ventricle. One tumour lay at the apex of the left frontal lobe only on the convexity, the concavity remained sound. It occupied the lower aspect of the bend of the second frontal convolution; the first and third frontal convolutions were intact. At one part it was nearly an inch long and 0.7 inch broad, and had caused complete disappearance of the cortical substance; a part of the white substance underneath was also gone. It extended inwards for nearly one-third of an inch. The surrounding white and grey matter, for about 0.12 inch, was of a diffuse red colour, softened and studded with very small hæmorrhages, not quite so large as pin-heads. Over it was an area of yellow necrosis, about 0.08 inch broad. The tumour was caseous tubercle. The second tumour lay on the mesial aspect of the right occipital apex, projecting a little above the level of the brain: it was attached to the pia mater, and there were several delicate adhesions between it and the dura mater. Its length was 1.2 inch; height, 1.2 inch; thickness, nearly an inch. It therefore was evident that the greater part of the tumour was embedded in the cerebral substance. It was situated directly in the calcarine fissure, the sides of which it had pushed apart. Its surface was yellowish, with some flattened knobby outgrowths. The occipital fossa was quite unaffected. The tumour extended into the cerebral substance for about 0.8 inch. At its circumference was a softened zone of a yellowish-red colour, in which were a considerable number of very small punctate hæmorrhages. The tumour was non-vascular and caseous.

In answer to the question as to which of these tumours caused the hemiopia, Huguenin points out that the frontal one could have nothing to do with it; since (1) if a lesion do not implicate the immediate neighbourhood of the central convolution, it does not affect motion; (2) such lesions never affect sensation. So in this case, this frontal lesion had caused no symptoms, motor or sensory. Again, many observations have shown the connection between occipital lesions and hemiopia. It is interesting to note that in the above case the tumour exactly destroyed the centre of the region in which the bands of Vicq d'Azyr occur in the cortex. Has not this defined cortical region, then, probably a marked relation with the sense of sight?

CASE II (Haab). A woman, aged 61, in Feb. 1878 had endocarditis and pericarditis. Shortly afterwards, she had paresis of the left arm and leg, most probably in consequence of an embolism. She soon recovered from the hemiplegia. In July she could walk quite well, and do light work with the left arm. Any prolonged work with the left hand, however, now caused pain in the left arm and palpitation of the heart. The chief symptom was, that she could not see objects towards the left with the left eye. On examination, Dr. Haab found intelligence good. The movements of the left arm and leg were well performed, but rather more difficult than those with the right. There was no true paresis anywhere. The ocular muscles acted normally. The pupils were equal, below medium size, and reacted well. The sensibility of the skin was normal. Hearing and smell were unaffected. The left half of the field of vision was wanting on both sides, but the patient (as usual) had only noticed the defect in the right eye. The boundary of the defect on each side was straight and perpendicular, passing through the fixation point. V=1 H 2D with each eye. Perception of colours in the retained half of the visual field was

normal on both sides, and the colour-fields were limited towards the left of the above-mentioned vertical line, and extended right up to it. Ophthalmoscopic examination revealed nothing remarkable in the fundus. The discs had a senile grey look and shallow physiological excavation. The vessels showed nothing abnormal. This condition remained the same till the patient's death, a year later.

The diagnosis was localised embolic softening in the right hemisphere, probably in the posterior part of the optic thalamus, or further back towards the cortex.

In July 1879 she died from mitral insufficiency. A *post mortem* examination was made sixteen hours after death. On removing the calvaria, the posterior angle of the right occipital lobe was seen to be somewhat depressed; and here the pia mater was stretched loosely over a collection of clear serous fluid. This cystoid spot of softening appeared small viewed from above and laterally; the most posterior angle of the lobe was alone deficient, so that it appeared curtailed by about one-fifth of an inch. On more exact examination, the softening was seen to have destroyed a tolerably large area of the brain-cortex on the mesial side of the occipital lobe, and here the defect included the whole neighbourhood of the calcarine fissure for more than an inch and a half. In front, it stopped at a distance of two and a third inches from the apex of the lobe. The destruction was confined chiefly to the cortex, so that, between the cystoid softening and the closely adjacent posterior cornu, there was only found a fairly thick layer of white substance. The posterior cornu did not communicate with the cyst. Of the calcarine fissure there was nothing visible; it was obliterated along with the gyri bounding it. In a vertical direction (perpendicular to the calcarine fissure), the affected area had a breadth of 0.8 to 1.2 inch. It was a degeneration, viz., atrophy following an embolism, with a so-called 'cyst of softening'. No other pathological changes were seen in the brain. The regions of the thalamus, corpora quadrigemina, corpus geniculatum externum, and the optic tract, were quite intact on both sides. There was no lesion found to account for the temporary hemiparesis, so that it must be presumed that disturbances in circulation in the motor region of the right hemisphere were the cause of this. Microscopical examination of the optic nerves, commissure, and tracts showed no atrophy. The chiasma was cut specially in a series of successive transverse sections.

R. MARCUS GUNN.

HILLER ON THE HYPODERMIC ADMINISTRATION OF CATHARTICS.

DR. A. HILLER of Berlin (*Zeit. für Klin. Med.*, Band iv), has reviewed the experiments that have heretofore been made in the way of injecting into the subcutaneous connective tissue medicine intended to produce catharsis, and has at the same time somewhat extended the list. He has, for a number of years, upon merely theoretical grounds, expressed his belief in the possibility of producing such effects; and has maintained the opinion that it was only a question of time when appropriate remedies would be found for this purpose. But the discovery of a suitable remedy has until now evaded all pharmaceutical research; and among all those that have been proposed, there is not one that answers all the requirements of a hypodermic cathartic remedy.

Aloin, which has been the most universally used in experiments of this kind, gives, according to the manner of administration, a varied action. Hiller observed, after the injection of from 15 centigrammes to 2 decigrammes ($2\frac{1}{4}$ to 3 grains), a copious discharge in from four to six hours after administration. In a brief review of experiments by Kohn, not referred to by the author, aloin was administered subcutaneously, in the dose of 8 decigrammes, without producing catharsis.

The colocynthus purum prepared by Merck of Darmstadt, a light, greyish-yellow powder of a bitter taste, administered internally or subcutaneously in the dose of 5 to 10 milligrammes (.075 to .15 grain), produces watery stools with moderate tormina. A solution in alcohol, glycerine, and water, is the best adapted to hypodermic medication. The injection is very painful. There is also a resinoid substance called citrullin, extracted from the colocynth fruit, insoluble in water, which, when taken internally in the dose of 5 milligrammes to 1 centigramme, or if administered hypodermically in the same dose, dissolved in equal parts of alcohol, water, and glycerine, will produce the desired effect; but it produces also severe pain, accompanied by œdema and redness of the skin. The action of colocynth and citrullin is also manifested by the official extract of colocynth. A dose of 15 milligrammes to 6 centigrammes injected under the skin, produces diarrhœic evacuations, but also pain and œdema.

The substances thus far named, together with a small quantity of fluid, produce diarrhœa in from a half to one hour.

Experiments with cathartic acid from senna show that this remedy, rather freely soluble in water, will produce catharsis if taken internally in the dose of 2 or 3 decigrammes dissolved in water and glycerine. Administered subcutaneously, it produces painful inflammation of the skin, with a tendency to the formation of sloughs. If, however, the solution be made alkaline, this effect is not produced; and furthermore, 1 decigramme will occasion copious evacuations in eight to twelve hours.

The extract of elaterium, as well as the pure elaterin, is too often ineffective, and frequently it is for other reasons inapplicable.

Leptandrin, a glucoside of leptandra virginiana, internally, in the dose of 5 decigrammes, gently stimulates peristalsis without producing diarrhœa.

Euonymin, the glucoside of euonymus atropurpurea, internally (1 to 2 decigrammes) acts mildly. In obstinate constipation, a dose of 3 decigrammes or more will be found effective.

Baptisin, a glucoside of baptisia tinctoria, has to be given internally in the dose of 3 or 4 decigrammes, to produce mild catharsis in four or six hours.

The three latter remedies have been for a number of years employed in America, and their therapeutic value has well studied.

ERINGER ON THE PHYSIOLOGY AND PATHOLOGY OF THE STOMACH.

DR. LUDWIG ERINGER (*Deutsch. Arch. für Klin. Med.*, Band xxix, Heft 5 and 6) has made a large number of experiments on himself and on many other persons, to decide at what time during the state of digestion free hydrochloric acid appears in the gastric juice. He found that the latter contained

an excess of free hydrochloric acid during the third and fourth hours after an abundant and rich meal.

Examination of the gastric juice, in a case of typhoid fever, elicited the fact that the masses vomited during the period of the highest fever contained a large amount of free hydrochloric acid. As the results so far gained in this direction have been contradictory, this new addition to the chemistry of the digestion of persons suffering from high fever is rather important.

Examinations into the amyloid degeneration of the stomach showed, in eleven cases, that the vessels of the walls of the organ were also affected, more or less, by the same process of degeneration; frequently the muscular coat, especially the muscularis mucosæ, often a part of the areolar tissue of the mucous membrane and the glandular structure, participated in the same morbid alteration.

Dilatation of the stomach is brought by the author into causal connection with the coexisting considerable amyloid degeneration of the muscular walls of the organ. If the latter no longer possess the tonus which is necessary to enable them to carry the weight of the contents of the stomach, passive dilatation, its degree depending upon the amount of the contents, will temporarily ensue, and gradually change into permanent dilatation, as the peristaltic movement becomes less and less sufficient for the locomotion of the contents of the organ.

Concerning the development of ulceration in cases of amyloid degeneration, the fact was noted, that it is not the amyloid parts which are attacked by this ulceration, but those parts which are not suffering from amyloid degeneration, but which, not being provided sufficiently with blood from the degenerated vessels, fall a victim to the destroying influence of the gastric juice, which only an ample supply of alkaline blood can prevent. The physiological function of the stomach in cases of amyloid degeneration of the vessels of the mucous membrane of the organ undergoes this change, as proved by the frequently repeated examination of the contents of the organ in five such cases; that the gastric juice, at the proper time, exhibits a want of free hydrochloric acid.

Regarding the symptoms during life by which the physician, under certain circumstances, may be able to recognise this participation of the stomach in the amyloid degeneration, Dr. Frerichs first drew attention to the fact that in the beginning the appetite vanishes, and, from time to time, vomiting takes place, while the tongue is not coated. But Dr. Eringer contends that these symptoms are so little definite, and subject to such diverse explanations, that they can hardly be considered as possessing any diagnostic value. According to Dr. Eringer's experience, amyloid degeneration of the vessels of the stomach by itself does not exert any influence at all on the appetite. Vomiting, with clean tongue, absence of tenderness in the epigastric region, and amyloid degeneration in other organs, are the symptoms mainly to be relied upon. The favourable action of acids, and especially of hydrochloric acid, in cases of typhoid fever, seems to receive an explanation by the facts above mentioned; and the latter give the hint not to administer acids, for the purpose of assisting digestion, immediately after a meal, but about two hours after the same.

MÜLLER ON THE OCCURRENCE OF SEPTIC ACTION IN DIABETES.

DR. W. MÜLLER (*Erst. Intelligenzblatt*, 1882, No. 41) draws attention to this subject in an interesting and partly historical paper. That wounds occurring in diabetic patients are prone to resist treatment, and to be followed by phlegmonous inflammation, has long been known. The frequent occurrence of gangrene and unhealthy inflammatory processes in such cases was first observed by a French military surgeon, Marchal de Calvi, in 1853; and, ten years later, he published a series of 133 illustrative cases. He made the observation that in such cases it was generally the otherwise healthy and robust-looking patients, and especially those of middle age, who were most frequently affected in this way.

Nélaton and Verneuil, and, later, Peyrot, have also recorded corroborative cases. In Germany, Wagner in 1857, and Griesinger in 1859, have in turn discussed the subject; and, more recently, a work by Dr. Roser has appeared, in which he states his conviction that the development of inflammatory processes, in the course of diabetes, is due wholly and solely to the altered condition of the blood. He believes the gangrenous and phlegmonous processes to be entirely different from those of the non-diabetic, being altogether independent of the possible entry of septic germs from without, and hence antiseptic treatment is not sufficient alone to ward off septic inflammation. Only when coupled with strict antidiabetic diet is it of any real value. From this point of view, diabetes forms at the present time a blank in the accepted theories of septic action.

Other writers, as Kraske and König, believe that the infection takes place from without, but that the condition of the blood in diabetes is especially favourable to the further development of the morbid processes, and favourable to such an extent that antiseptic treatment is often of no avail.

Dr. Müller brings together a series of cases, for the most part recorded by the writers already mentioned, all proving the proneness of phlegmonous inflammation and gangrene to occur in diabetic patients, and to resist ordinary treatment in such cases, and a few illustrating the possibility of obtaining good results by strict adherence to the rules of antidiabetic diet.

One case, recorded by Rosenberger, deserves attention. The patient, aged 61, had been under treatment for some years for diabetes, with alternate relief and relapse. An operation for removal of a cancerous breast was performed with the utmost attention to antiseptic precautions. The wound healed well, and the precautions were somewhat relaxed. Shortly afterwards, a violent septic fever set in, and proved fatal, without any evidence of alteration in the healthy condition of the healed wound. No *post mortem* examination was, however, made.

Out of twelve cases recorded, only three occurred in women. Griesinger's statistics also show that nearly three-fourths of diabetic patients are males.

Dr. Müller seeks at some length for the explanation of the phenomena in Rosenberger's case, reviewing in turn (1) the possibility of infection taking place through the healing tissues of a healthy wound; (2) the possibility of a delay, from any cause, of the ordinary febrile disturbance following a wound; (3) the possibility of the conversion of the ordinary micro-organisms, which many writers believe to pervade all the fluids of the body, into germs capable

of exciting true septic inflammation by the influence upon them of the altered condition of the blood.

The first two propositions he negatives as unlikely, the third he regards as possible. It would appear probable that certain forms of bacteria, which have entered the body by whatever channels from without, do at times find the favourable conditions in some one or more organs for their development and propagation, independently of any known dyscrasia of the blood. May it not also be possible that the diabetic condition of the blood may afford the favourable conditions necessary for the development into septic germs of the otherwise harmless micro-organisms of the body? To this question Dr. Müller finds an affirmative answer in the spontaneous occurrence of carbuncles, boils, and gangrene in the ordinary course of diabetes. The results of treatment also would seem clearly to indicate that the evil must be sought for in the blood itself. In a large number of cases the enforcement of strict antidiabetic rules of diet was followed by improvement, and this was so marked in the cases observed by him, that Roser appears to have regarded the diabetic treatment as far more conducive to the healing of the wound than was the antiseptic treatment of the wound itself.

The details of Rosenberger's case suggest once more the question whether operations ought to be undertaken upon diabetic patients or not. The opinions of Marchal, Verneuil, and Roser may be accepted in answer. They all agree that operations should never be undertaken in such cases unless they are absolutely necessary, and only then if some improvement has been found to follow upon a course of dietetic treatment, and if the patient be otherwise in fair health. Careful dieting, therefore, should be observed both before and after the operation, and, although their results would appear at times disappointing, antiseptic precautions should be rigidly observed.

E. CLIFFORD BEALE, M.B.

NUSSBAUM ON A SIMPLE AND SUCCESSFUL MEANS OF TREATING WRITER'S CRAMP.

A NEW method of treating this most troublesome of disorders is detailed by Professor von Nussbaum in the *Arztliches Intelligenzblatt*, No. 39, 1882. Occurring only when the affected muscles are called into action, the cramp is unmistakably due to spastic contraction of a certain set of muscles whilst their antagonists remain in a state of abnormal feebleness. Such a condition is not of necessity acquired by over-use of muscles, but in many cases is clearly congenital and inherited. For its relief various mechanical contrivances have been unsuccessfully employed, and tenotomy, myotomy, and nerve-stretching have been performed with no better results.

Long-continued tonic treatment, with almost complete rest to the affected hand, electricity, and certain gymnastic exercises, have been of some service. A well-known writing master in Frankfort has succeeded in carrying out a series of manipulations upon the affected limbs, which have been followed by really successful cures; but, although his practice has been well investigated by various surgeons, others have been unable to obtain such good results, which must therefore be attributed to individual skill. A method, therefore, which although made public, cannot be imparted to others in such a manner as to be successful in their hands, remains a dead letter as far as its scientific value is concerned.

'On closer investigation it became more and more evident to me that, be the cause of the affection what it might, the normal antagonism of the muscles was pathologically altered, a spastic contraction of the flexors and adductors being always associated with weakness of the extensors and abductors. It occurred to me that, if one could construct such a penholder as could be manipulated by the extensors and abductors instead of by the flexors and adductors, the cramp could not possibly occur, and thus the act of writing would prove the best means of curing a writer's cramp.'

Acting upon this idea, Professor von Nussbaum constructed a kind of 'bracelet' of gutta-percha, of an irregularly oval shape and about three inches and a half in diameter, just wide enough to admit all the fingers. Thrusting the thumb and first three fingers into this bracelet, he found that strong extension of the enclosed fingers and abduction of the thumb were necessary to keep it fixed in its place. To the upper surface of the bracelet a penholder was attached by a screw, and adjusted so that the point of the pen should lie in a convenient position for writing when the hand was laid flat upon the table.

The more powerfully the movements of extension and abduction are employed, the more firmly will the bracelet be held, and, as a consequence, the better will be the writing. The form of the bracelet admits of variation, the object being to give employment as fully as possible to those muscles which, in the writer's cramp, remain weak and inactive, and thus to restore a normal antagonism between the two sets of muscles.

In order to fully test the value of his invention, Professor Nussbaum obtained a large number of cases by means of advertisement of a 'gratis cure' in local newspapers. Selecting cases of undoubted writers' cramp, he found that improvement in the writing power took place at once, and he consequently supplied each of his patients with a suitable bracelet for the purpose of practising in private.

On the second day he received a four-sided letter from a patient who had not written so much for many years, and who, with an ordinary penholder, was unable to write his own name legibly. All the patients agreed in stating that no cramp whatever supervened whilst using the bracelet, but very many described the occurrence of an extremely agreeable sensation in the hand after a few moments, and especially in those places which had before been the seat of the chief discomfort.

The continued use of the bracelet for many weeks is recommended; and, although it may be of itself sufficient to cure the disorder, it is nevertheless probable that the use of electricity, massage of the hand and arms, etc., at the same time, would hasten the successful issue. E. CLIFFORD BEALE, M.B.

ZAUFAL ON THE IMPORTANCE OF OPHTHALMOSCOPIC EXAMINATION IN DISEASES OF THE EAR.

At a meeting lately held at Prague (*Prager Med. Woch.*, 1881, No. 45; and *Annales des Maladies de l'Oreille, du Larynx*, etc., December 1881), Professor Zaufal drew attention to the importance of examining the eyes ophthalmoscopically in diseases of the ear. The subject has already been noticed by others, especially Knapp, Moos, Kipp, and Allbutt, who have showed the relation which subsists between the condition of the retina and the various affections

of the organ of hearing; but so far the question has not received the attention it has deserved. After entering into details with regard to the manner in which he conducted his investigations, the author deduces the following conclusions.

1. Ophthalmoscopic examination should form an integral part of the clinical study of the auditory apparatus. It should be practised in affections of the membrana tympani, especially in acute or chronic suppurative otitis at all stages of the disease, in spite of the absence of intracranial symptoms. Further, as it is shown by experience that intracranial disorders may be occasioned by affections of the meatus, in these cases also it is wise to examine the eyes with the ophthalmoscope.

2. In the instances in which examination of the ear proves negative to account for the existence of difficulty of hearing, or of deafness, subjective noises, vertigo, etc., the use of the ophthalmoscope might clear up the diagnosis; for it would then be possible to determine whether the disease was localised to the labyrinth or was intracranial in character, or whether it involved both of these regions simultaneously. (Knapp recommends the use of the ophthalmoscope in deafness so-called.)

3. The use of the ophthalmoscope is indispensable in connection with the question of applying the trephine to the mastoid apophysis. It may reveal the extension of the inflammation to the intracranial cavity (meningitis, thrombosis of the sinuses, etc.) before even the appearances of any acute symptoms, subjective or otherwise. When the meningitic symptoms increase in intensity, the fundus of the eye also exhibits an increase in its morbid appearances; these appearances, however, decline as the intracranial symptoms abate.

4. The influence of the trephine upon the functions of the brain can be appreciated, especially after the observance of the improvement in the optic disc and the retina which follows the operation.

5. When inflammation of the middle ear involves the meninges of the brain, it frequently happens that the eye of the same side is the first to exhibit change; but generally both eyes are attacked at the same time, in which case the one on the opposite side shows the presence of the changes most unmistakably.

6. After the application of the trephine the improvement should be most marked in the eye on the diseased side; but a simultaneous improvement is also observed in the other eye.

7. Up to the present time, at the clinique at Prague, on each occasion in which suppuration of the middle ear occurred, complicated either with meningitis or thrombosis of the venous sinuses, ophthalmoscopic examination, when it was practised, demonstrated the presence of marked lesions in the optic fundus (cupping of the disc with or without neuroretinitis); so much so, that this form of meningitis appears to be distinguished from other forms, in that it produces almost always changes in the fundus of the eye. As to the cause of this fact, the author is not in a position to hazard an explanation.

In order to illustrate the value of ophthalmoscopic examination in relation to the question of trephining the mastoid apophysis, the author cites the following case. A young student, aged sixteen, suffered for nine months from suppuration of the middle ear, with perforation of the membrana tympani and enlargement of the glands of the neck. The disease resisted all treatment, until the health of the patient began to materially decline. Anorexia and nocturnal

rise of temperature supervened, without, however, any complaint of pain. In the course of time, he was attacked with occasional vertigo; and he noticed that, whilst his ear was being syringed, the giddiness would always come on. The mastoid apophysis was, on external examination, intact; it was tender neither on pressure nor to percussion; but when percussion was practised on it or upon the left side of the cranium each blow produced slight vertigo. Ophthalmoscopic examination by Dr. Schenkel gave the following result. On both sides, the optic fundus was of a deeper colour than normal, being of a dark red hue. The redness was more marked in the neighbourhood of the disc, and extended to its inner half. The arteries did not exhibit any obvious alteration, either in diameter or in course; while the veins, on the contrary, were very dilated, deeper in colour, and tortuous. The discs were not clearly defined, their internal segment was intensely injected. Upon the right disc, near the point of emergence of the central vessels, a hæmorrhage had occurred covering the whole of its centre. The diagnosis was, binocular venous hyperæmia.

It having thus been shown that meningitis was about to supervene, if it had not already commenced, on the 14th of June the trephine was applied to the mastoid apophysis. The next day, frequent vomiting (chloroform) occurred, but the vertigo during the syringing and on percussion had vanished. The patient expressed himself as feeling better; he recovered his appetite, was able to sleep, and the pulse fell to normal. On examining the eyes four days after the operation, the internal aspect of the discs was still injected, but the venous distention had unmistakably declined. The hæmorrhage upon the right disc had undergone marked diminution. The condition of the patient being satisfactory, he was allowed to take exercise out of doors. On the 22nd, the temperature rose rapidly to 41 deg. Cent. (105.8 Fahr.) The eyes did not exhibit, on examination, any change, and this being so, it was possible to exclude any intracranial affection, as meningitis, abscess of the brain, or venous thrombosis. The constitutional disturbance disappeared in a short time, being probably of a septic nature, and the patient completely recovered his health. When the eyes were last examined, the fundus of each was normal.

ROTATION OF THE VERTEBRÆ IN LATERAL CURVATURE OF THE SPINE.

IN cases of lateral curvature, the rotation of the vertebræ upon their vertical axes, so that their bodies turn in the direction of the convexity of the curve, and their spinous processes in the direction of the concavity, is a fact which has been recognised for many years. Dr. Dods* has the credit of being the first to describe this condition; and since his time the majority of writers upon lateral curvature have referred to it, and a variety of opinions as to its cause have been advanced.

Rotation has been attributed to the serratus magnus muscle upon the convex side of a dorsal curve, acting upon the ribs as upon levers, the fulcrum of each rib being the transverse process of the corresponding vertebra. This hypothesis might be disproved in several ways; but it will suffice to remark that rotation occurs as completely

in the lumbar, where there are no ribs and no serratus magnus muscle, as it does in the dorsal region.

Another theory is that which attributes rotation to the unopposed action of the erectores spinæ muscles upon the convex side, pulling the ribs and the transverse processes backwards; but, even if we could believe that such an effect were likely to be produced in the dorsal region, it could not occur in the lower lumbar or sacral region.

Mr. Alexander Shaw* described rotation as the result of the changes which are produced in the articulating processes by lateral pressure. He states that by pressure, the oblique processes of the concave side are shortened and flattened by absorption; while, owing to the processes on the convex side escaping compression, they 'preserve their normal shape and size, and diverge from each other. The influence which this contrast in the rate of consumption of the substance of the vertebræ on the two sides may have in causing contortion to be combined with lateral incurvation, will be apparent when we take into view the relative position of the processes to the central axis of the spine. They are placed postero-laterally in the vertebræ. Consequently, at the same time that the column falls sideways, a rotatory movement in a partially horizontal plane will take place upon the oblique processes of the concave side as centres or pivots; and the vertebræ will, therefore, perform an imperfect gyration with their sides, which have undergone the chief destruction, pointing forwards.'

Mr. Adam† remarks, 'The purely mechanical explanation given by Mr. A. Shaw of the mode in which rotation of the vertebræ takes place, will, I believe, be found correct.'

This theory has been severely criticised. Herman Meyer‡ ('Die Mechanik der Scoliosis', *Virchow's Archiv*, vol. 35) opposed it upon the grounds that (1) the articular processes have no definite or prescribed range of motion; (2) spinal torsion may be met with in all parts of the vertebral column, although the oblique processes differ in shape and position; (3) torsion prevails at an age when the oblique processes are not fully developed.

Meyer performed experiments upon a number of dead bodies. In fully developed spines of adults, he produced curvature without torsion. In foetuses and children, rotation accompanied the artificial production of lateral curvature. In a girl aged fourteen the torsion produced was moderate, until the anterior longitudinal ligament had been dissected off, when torsion became perfect. In a girl of sixteen, the artificially produced lateral curvature was without torsion, until the anterior ligament was divided. Meyer thought that rotation was produced by the action of the ligamenta subflava.

Dr. H. Dick§ considered that the rotation is the mechanical consequence of the bending of the column. 'The spine in some respects resembles a strong elastic stick or column, which, if pressed at both extremities more strongly than it can bear, forms a bow, and in that condition will not bend backwards or forwards, but will rotate at the central points of the bow.'

A work has lately been published by Dr. C. Nicoladoni, of Stuttgart, entitled *Die Torsion*

* *A System of Surgery*, edited by T. Holmes, 2nd edit., vol. v, p. 862.

† *Curvature of the Spine*. Churchill's 2nd edit., 1882, p. 142.

‡ The reporter has quoted the translation which occurs in Louis Bauer's Lectures on Orthopaedic Surgery. New York, 1868.

§ *Medical Times and Gazette*, Aug. 1864.

* *Pathological Observations on the Rotated or Contorted Spine, commonly called Lateral Curvature*. Lond., 1824.

der Skoliotischen Wirbelsäule, which advances an extraordinary theory of this peculiar twisting of the vertebræ. He describes the dissections of a large number of spines affected with lateral curvature, and he states that 'the so-called torsion of the scoliotic vertebral column is only apparent, and is rather to be regarded as an optical general impression of the general want of symmetry in the individual scoliotic vertebral bodies.' The reason of the twisted appearance is to be sought for in the successive increase and diminution of partial development in growth of the vertebral bodies. He arrives at this conclusion, partly because, in the contorted specimens which he has examined, the anterior longitudinal ligament did not pass over the most prominent portions towards the convexity, but maintained a median position. He considers that the condition of the bones which has been described as a rotation, is the result of overgrowth of the body of each vertebra towards the convexity, where it is less pressed upon, and retarded development on the side of the concavity where the pressure is greatest.

There can be no doubt that the unequal pressure causes an unequal development of the vertebræ; but that the so-called rotation is only the appearance of this unequal development can hardly be seriously entertained by anyone who has examined a dissected specimen of a spine with the vertebræ rotated, each bone being twisted in its entirety.

Dr. A. B. Judson (orthopædic surgeon to the out-patient department of the New York Hospital) has advocated a theory which is based upon the fact that the posterior portion of the spine is a part of the parietes, and is thus more or less confined to the median line; whereas the bodies of the vertebræ project into the cavities of the chest and abdomen, and are free to move to right or left. Dr. Judson illustrates the theory by placing a brass rod, having only lateral movement, through the canal of a spinal column, and attaching the spinous processes by elastic cords to a framework. 'To produce lateral curvature of the column, with rotation of the vertebræ, the knob at the summit of the rod is to be depressed. Double curvature, with rotation in each curve, may be produced by confining one of the dorsal vertebræ with the silk check loops, and depressing the knob.'

Dr. Judson is evidently not aware that a similar theory was advanced many years ago by Charles H. Rogers-Harrison, in a work *On Deformities of the Spine and Chest*, published in London in 1842, who explained rotation in the same way. We will quote the two descriptions.

Dr. Judson (*New York Med. Rec.*, 1882) writes, 'The explanation offered by me is worded as follows. "The distinguishing feature of the explanation of rotation here proposed is the recognition of the fact, heretofore overlooked, so far as I am aware, that the posterior portion of the vertebral column, being a part of the dorsal parietes of the chest and abdomen, is confined in the median plane of the trunk, while the anterior portion of the column, projecting into the thoracic and abdominal cavities, and devoid of lateral attachments, is at liberty to and physiologically does, move to the right and left of the median plane."'

Mr. Rogers-Harrison writes (1842, p. 93), 'To conceive the cause of this extraordinary mode of derangement, it is necessary to imagine that, in a well-marked curvature of the vertebral column continuing to sustain the weight of the body, the vertebræ of the middle of that curvature are, in

fact, in the same situation as if they were urged by a direct and horizontal force on the side of the concavity, towards that of the convexity. In this impulsion, the body of the vertebra, isolated in its anterior and lateral parts, experiences no resistance; but the articular processes are powerfully restrained by their reciprocal connection. The transverse processes find, in their articulation with the tuberosities of the ribs, a resistance to their deviation, which would be very weak on the part of an isolated rib, but which becomes considerable by its union with the adjoining ribs. It results from this exposition, that, behind the central part of the dorsal column, there is efficacious resistance to its lateral displacement; that before this central part there is no resistance to that displacement; and consequently the vertebra must necessarily turn on its axis to arrive at the position which observation so frequently presents.'

Although we have shown that this theory—which we believe to be the correct one—was not originated by Dr. Judson, yet it must be acknowledged that we are much indebted to him for re-discovering it, and for bringing it prominently before the profession.

E. NOBLE SMITH.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. MACKEY.—Salicylate of Soda as a Local Application in Gout. (*Brit. Med. Journ.*, October, p. 718.)
2. KENDALL.—Salicylate of Soda as an external Application in Gout. (*Lancet*, Sept. 1882, p. 513.)
3. FRANCIS.—Chronic Dysentery. (*Practitioner*, Nov. 1882, p. 345.)
4. BRUNTON.—Making Poultices. (*Practitioner*, Oct. 1882.)
5. RADCLIFFE.—On Eatables. (*Practitioner*, Oct. 1882.)
6. LEECH.—The Treatment of Dropsy. (*Brit. Med. Journ.*, Oct. 1882, p. 769.)
7. MURRELL.—On Agaric. (*Practitioner*, Nov. 1882, p. 321.)
8. MEREDITH.—Oil of Peppermint in Zona. (*Birmingham Med. Review*, June 1882.)
9. LUYB.—Ergotin in the Treatment of Cerebral Affections. (*L'Encéphale*, June 1882.)
10. HOLLMANN.—Novel Uses for Pepsin. (*Nederland Weekblatt*, No. 18.)
11. BREWER.—Carbonate of Ammonium as a Stimulant. (*Amer. Jour. of Med. Sciences*, July.)
12. OKS.—Curare in Hydrophobia.
13. HASTREITER.—The Treatment of Epilepsy by External Application of Turpentine. (*Wiener Med. Presse*.)
14. WERTNER.—Apomorphia as an Expectorant. (*Presster Med.-Chir. Presse*, Nos. 18 and 19, 1882.)
15. ROSSBACH.—Apomorphia. (*Berlin Klin. Woch.*, No. 27, 1882.)
16. DOMENSKI.—The Alcoholic Treatment of Pneumonia. (*Deutsche Med. Zeitung*, No. 35, 1882.)
17. PAGE.—Chinoidin and Capsicum in Intermittent Fever. (*New York Record*, Oct. 7, 1882.)
18. BROWN-SÉQUARD.—The Anæsthetic Action of Carbonic Acid Gas. (*Le Progrès Méd.*, 1882, No. 45.)
19. Formulæ. (*New Remedies*, Sept.)

1. Mackey on Salicylate of Soda as a Local Application in Gout.—In the *Brit. Med. Jour.*, Oct. 1882, p. 718, Dr. Mackey draws attention to the great value of a solution of salicylate of soda applied to rheumatic and gouty joints. The cases given fully bear out its value.

2. *Kendall on Salicylate of Soda as an External Application in Gout*.—Mr. Kendall reports, in the *Lancet*, Sept. 1882, p. 513, that, after employing several lotions with the object of removing gouty excrescences without effect, he tried a solution of salicylate of soda, ten grains to the ounce, to some small deposits in the ear. The chalky matter softened and in four days disappeared, leaving only a small scar as its representative.

3. *Francis on Chronic Dysentery*.—Mr. Francis, in the *Practitioner* for November 1882, p. 345, records a case of chronic dysentery, which had been treated on three successive occasions, resulting in the improvement only, and not the cure, of the disease. Mr. Francis treated his patient on the following principles with perfect success. The diet must be not only bland and nourishing, but capable of ready and quick absorption, as little excrementitious matter as possible being left; for this, strong simple soup, thickened with arrow-root or corn-flour, and after the first few days bread and butter, milk and eggs, may be allowed. The patient must remain in the recumbent position for the first forty-eight hours. In this case, there being no actual lesion of the intestinal tract, but only irritability, deficient tone of the muscular coat, and sluggish liver, a pill was regularly administered containing ipecacuanha, mercury, extract of gentian and opium; the last Mr. Francis believes to be more efficacious in these cases than any other drug. Astringents he has found comparatively useless, except in hæmorrhagic dysentery, from the impossibility of bringing the remedy into direct contact with the diseased part. In all cases early hours and meals must be insisted on; and lastly, the residence should be in a medium climate, and if possible at the seaside.

4. *Brunton on Making Poultices*.—Dr. Lauder Brunton, in the *Practitioner*, Oct. 1882, p. 279, describes how to make a poultice. He points out that in inflammation, heat and cold, though acting in apparently opposite ways, bring about the one result of diminishing pain; the former dilating the capillaries, and so diminishing the painful throbbing by affording a ready outlet for the blood into the veins; the latter lessening the impact of the blood, by diminishing the quantity sent to the inflamed part. In applying a poultice to an inflamed part, it is best done in the ordinary manner, directly to the skin; but in cases of inflammation of internal organs, or where spasm is present without inflammation, the poultice should be applied as hot as possible, while the skin must be protracted from scalding. With these two objects in view it is best to enclose the poultice in a flannel-bag measuring about twelve inches by eight; by doing this, the poultice may be applied to the skin boiling hot without burning; the heat gradually increases as the flannel becomes wet, and lasts for a much longer time. One poultice so applied often effects that which a succession of poultices made in the ordinary way fails to do.

5. *Radcliffe on Eatables*.—In the *Practitioner*, Oct. 1882, p. 242, Dr. Radcliffe points out what differences should be made in the diet on a day on which hard physical work is done, as compared with a day of rest. The true change can only be arrived at by considering the differences in the excretions. It is a well-known physiological fact that the quantity of urea excreted under these two conditions is the same; the carbonic acid, however, is increased in quantity proportionate to the amount of exercise taken, so that the ordinary idea of eating more nitrogenous food while doing hard work is not only

wrong but actually injurious, by throwing more work on the excretory organs. The true value of the several classes of food is fully discussed; special stress being laid on butter, or oil, as a heat-producer and as a food for nerve-tissue, many persons being found suffering from various chronic disorders of the nervous system who have abstained from the fatty and oily articles of food, and who, when induced to take more of these articles, have invariably improved considerably. Dr. Radcliffe ends a most instructive paper by strongly recommending the *bouillon* of the French *pot-au-feu* for invalids, instead of the ordinary beef-tea or extractum carnis, and gives a receipt in full for its manufacture.

6. *Leech on the Treatment of Dropsy*.—Dr. Leech, in a paper read at the last annual meeting of the British Medical Association, reported in the *British Med. Journal*, Oct. 1882, p. 769, discusses the treatment of cardiac, hepatic, and renal dropsy. Firstly, as to the advisability of removing the fluid, either by mechanical means or by the eliminants of water, such as diaphoretics, diuretics, and purgatives; every case has to be considered as to the real cause of the dropsy, the stage it has reached, and the condition of the patient and his tissues; and without this the more routine treatment by eliminants of water may not only not do any good, but actual harm may result; thus, in the earlier stages of heart-disease with anasarca, diuretics may succeed admirably; later on, as the general health fails, they lose their power, even though there be no evidence of increasing obstruction of the circulation; and at last it may happen that we cannot drain the water from the œdematous tissues, even when they are pricked or tapped. Secondly, as to the modes of elimination; of these, speaking of paracentesis, Dr. Leech believes that, when dropsy is due to a block in the portal vein, tapping is almost necessarily followed by a recurrence; in acute cirrhosis, when the distention causes great discomfort to the patient, this operation does not give even temporary relief, nor has he seen any good result from it in advanced cases of ascites due to cirrhosis, where symptoms of coma had developed. Diuretics rank next to paracentesis, but they can only act when the kidney is functionally competent, and when the tissues are in such a condition as to be able to give up their water. In hepatic dropsy, copaiba, which can be given for a long time with advantage, and caffeine are most useful. Digitalis and saline diuretics in cardiac, and diaphoretics are of most value in renal, dropsy.

7. *Murrell on Agaric*.—Dr. Wm. Murrell, in the *Practitioner* for November 1882, p. 321, gives an account of a series of sixty-four cases of phthisis in which he used agaric for the prevention of sweating, in doses varying from three grains to half a drachm. How it acts in these cases is not very clear; it is undoubtedly a good remedy, but not equivalent to others more easily administered, as atropia, picrotoxin, etc. From these cases, Dr. Murrell forms the following conclusions. In small doses, agaric is slow and uncertain in its action, whilst, if given in larger quantities, it is apt to purge violently. The purgative action may be obviated by the addition of Dover's powder; but if we give Dover's powder, we do not want agaric, as the former is one of the best remedies for the night-sweating of phthisis. It is with great difficulty that patients can be induced to take it, agaric being a very light powder, not miscible with water, with a disagreeable very bitter taste; and it is very difficult to 'get down'. Nevertheless, it prevents the sweating effectually, it checks the cough, and, if

not given in too large a dose, promotes sleep. It has, however, not sprung very rapidly into favour, having taken over a hundred years to reach its present position.

RICHARD NEALE, M.D.

8. *Meredith on Oil of Peppermint in Zona*.—Dr. Meredith writes (*Birmingham Med. Review*, June 1882):—"I have found the oleum menthæ piperitæ more effective than any other form of anodyne application I have tried in allaying the neuralgic pains often piteously complained of in cases of herpes zoster. These distressing pains—worse in elderly people—are complained of often when the eruption has disappeared; but painting the affected parts over with oleum menthæ piperitæ nearly always affords speedy relief. I have painted the oil over the eruption when it was out in a fresh florid condition, and that with great relief to the patient. The value of this application, in pains of neuralgic character, deserves to be better known than it is."

9. *Luys on the Use of Ergotin in the Treatment of Cerebral Affections*.—Dr. Luys (*L'Encéphale*, 25th June 1882) points out that he formerly proposed a methodical classification of the disturbances of the faculty of speech, by endeavouring to include in the series of normal phenomena all known varieties of verbal expression. Considered in so far as a purely somatic action, speech may be modified by the following different disturbances. 1. True hemiplegia of speech; transitory aphasia, accompanied by attacks of hemiplegia, may disappear at the end of some months. 2. Verbal ataxy may occur. The patients thus affected use, in answering, one word in place of another, answer in monosyllables in a monotonous fashion, and have no other vocabulary than some articulate sounds, of which they are unable to modify the formula (this is the ordinary classic aphasia). 3. Finally, there are cases in which we meet with subjects more or less neurotic and predisposed, in whom, without the supervention of an hemiplegic attack, there occurs an automatic excellent excitation of the muscles of phonation, in consequence of which the patients utter words which they do not intend to pronounce. The patients are aware of this disposition, and endeavour to regulate their speech; they are not, however, able to succeed, and say the most incoherent things. In this connection, it is curious to remark how these phenomena resemble, feature for feature, similar disturbances of motor power in choreic patients, when they desire to make one movement, and really execute another; and that these movements are so much more incoordinated, according as the patients are more attentive to their execution, and more under the sway of passing emotions. Ergotin seems to have a powerful action in this last very curious series of disturbances of speech. In a case, which serves as the basis of his communication, Dr. Luys gave ergotin in a draught in doses of 30, then 40, and even up to 50 centigrammes during the twenty-four hours. The patient became more mistress of herself; the congested condition of the face, which was very marked, became less so, and the excito-motor sensibility was also diminished. At the end of a fortnight, the medicine having been stopped, the train of morbid symptoms gradually reappeared. At the end of six days, the administration of ergotin was resumed, and a calm again supervened. Finally, the choreiform symptoms having reappeared after a cessation of the remedy, the patient was obliged to continue the use of it in a regular manner. The sedative action of ergotin on the circulation has also been utilised in certain congestive disorders. Associated with chloral, it has

been given also with satisfactory results in certain cases of mania, and, in the persistent insomnia of persons the subjects of hallucinations.

10. *Hollmann and Rosenthal on Two Novel Uses for Pepsin*.—Dr. Hollmann (*Nederland Weekblatt*, No. 18, p. 272) has used an aqueous solution of 16 grains of pepsin as an injection into the bladder of a patient who had hæmaturia, and in whom a catheter failed to empty the bladder. A few hours later, a dark, viscid, fetid fluid readily escaped through the catheter. Dr. Ed. Rosenthal has used an acidulated and concentrated solution of pepsin as a local hourly application to diphtheritic exudations of grave character, and reports that it caused rapid solution of the membrane. The solution was made with a drachm of Jensen's pepsin, twenty drops of chemically pure hydrochloric acid, and enough water to make a fluid ounce.

11. *Brewer on Carbonate of Ammonium as a Stimulant*.—Dr. E. P. Brewer of Norwich, Connecticut, publishes, in the *Amer. Jour. of the Med. Sciences* for July, the results of a series of experiments undertaken for the discovery of the essential nature of the stimulant power of carbonate of ammonium. He declares, as a result of his labours, the belief that 'the action of carbonate of ammonium is not due to the presence of the carbonic acid in combination with the base, but is dependent on the absorption of free ammonia while the salt is chemically combining with the hydrochloric acid of the gastric juice. The instability of the compound, which renders it so susceptible of digestion, is the quality that ranks it above all other ammoniacal salts.' The practical deduction is, that carbonate of ammonium is only serviceable as a stimulant for cases in which the secretion of gastric juice is but slightly affected. This is true of many acute maladies. In graver cases, when gastric digestion is deficient, the value of the remedy is correspondingly lessened. In chronic cases, and in acute cases of long duration, such as the latter stages of fevers, it is practically valueless. Unlike alcohol, it possesses no nutrient properties.

12. *Oks on Curare in Hydrophobia*.—In March last, three Bulgarian peasants were bitten by a mad wolf, and, after a very short time, showed all the symptoms of hydrophobia. One of these men was admitted into the Rasgrad Hospital, under the care of Dr. Oks, who administered $6\frac{1}{2}$ grains of curare (prepared by Fritz of Vienna) subcutaneously, in three days. Death was a foregone conclusion, and the patient died as expected, the drug proving itself no specific against hydrophobia, but acting as a palliative, by relieving the spasm of the glottis. Offenbach and Penzold had previously employed curare, in full doses, for rabies. In Dr. Oks' case prolonged immersion in a hot bath, as recommended by Kowalewski, gave such relief that the patient implored his attendants that it might be repeated.

13. *Hastreiter on the Treatment of Erysipelas by External Application of Turpentine*.—Dr. Hastreiter (*Wien. Med. Presse*) has tried, with great success, a modified form of Lücke's treatment of erysipelas. Lücke recommended that turpentine should be rubbed in. Dr. Hastreiter simply paints the affected part with the oil. The temperature and pulse fall rapidly. The advantages of this method of treatment are these. 1. It is easily applied, without fear of producing irritation. 2. It can be readily carried out by the most unskilled, when prescribed by the surgeon. 3. All other coverings for the affected part, such as wool, flour, or lint, may be dispensed with. 4. No antipyretic medicines need be given. 5. Very often

this treatment averts with success the worst results. 6. At the outset of the disease, it may be cut short by this treatment. 7. The atmosphere of turpentine surrounding the patient will kill specific germs, and prevent extension of the disease.

ALBAN DORAN.

14. *Wertner on Apomorphia as an Expectorant.*—Dr. M. Wertner of Wartberg, says (*Pester Med.-Chir. Presse*, Nos. 18 and 19, 1882) that the tendency to cough in the early stage of bronchitis is removed by the use of small doses of apomorphia, and the excretion mucus progresses without the tormenting cough. Jürgensen has already recommended apomorphia in catarrhal pneumonia, when, by means of wide-spread râles and increasing dyspnoea, the expectoration is diagnosed to be great, and this has not been mitigated by the use of other expectorants. Apomorphia has this advantage over other emetics, that it does not produce collapse, unless large doses be used. The author gave a patient, with pneumonia, who threatened suffocation, a mixture of 20 centigrammes (about 3 grains) of apomorphia in 100 cubic centimètres of water, of which 1 tablespoonful was to be taken hourly. The intended prescription was 2 centigrammes; but, by accident, Dr. Wertner ordered ten times that quantity. On visiting the patient next morning, he feared to hear that he was poisoned; but found that he had taken three doses in the first three hours, and, in the fourth hour, two doses. He had a succession of attacks of fainting; difficulty of breathing, and feeling of suffocation were experienced; a great deal of mucus was expectorated, and the patient revived. Dr. Wertner prescribes generally the following mixture: hydrochlorate of apomorphia, 1 to 20 centigrammes; diluted hydrochloric acid, 5 minims; distilled water, 120 grammes; simple syrup, 30 grammes; 1 tablespoonful every one or two hours. Children take half the adult dose. Lewin says that apomorphia, which has become discoloured (green), is as effectual as the colourless. It is to be wished that apomorphia should replace the dangerous tartar emetic in practice of children. The most convenient mode is the hypodermic solution of 5 centigrammes to 10 grammes of water. Jurasz gives the following doses, per age: up to 3 months, .5 to .8 milligramme, under 1 year, .8 to 1.5 milligramme; under 5 years, 1.5 to 3 milligrammes; under 10 years, 3 to 5 milligrammes; beyond 10 years, 5 to 8 milligrammes.

ANGEL MONEY, M.D.

15. *Rosbach on Apomorphia.*—Professor Rosbach (*Berl. Klin. Woch.*, 1882, No. 27) extols the value of hydrochlorate of apomorphia as an expectorant, both in children and in adults. He considers single doses of 5 milligrammes to 1 centigramme (1-14th to 1-7th of a grain) as sufficient, especially in cases of dry irritable cough. The maximum daily dose in the new German Pharmacopœia is fixed at 5 centigrammes, but this is probably lower than necessary, since even a daily dose of .1 gramme (1½ grains), if given in divided doses, rarely produces vomiting. Large doses, however, do not appear so effective as small ones frequently repeated. If employed hypodermically, its effects are very different; even very small quantities will then suffice to produce vomiting. Its influence is essentially exercised upon the nervous centre, and its action as an emetic thus differs from that of tartarated antimony, which has less effect when administered subcutaneously than when given by the mouth. Apomorphia is recommended as an expectorant in phthisis, especially when given in combination with morphia

and hydrochloric acid. Hydrochlorate of apomorphia is somewhat difficult to preserve; in an aqueous solution it should be colourless; if an emerald green colour be present when the solution is diluted with 100 parts of water, the preparation is worthless.

16. *Domanski on the Alcoholic Treatment of Pneumonia.*—Dr. Domanski (*Deutsche Med. Zeitung*, 1882, No. 35) discusses this subject shortly and clearly, and lays down the following general maxims as the result of his investigations. 1. In all slight cases of pneumonia, that is, in those cases where the pulse remains strong, and where the temperature does not exceed 104 deg., or the dyspnoea become urgent, he considers that the use of alcohol is contra-indicated, and that it has a tendency to increase the extent of the lung-mischief. 2. It is likewise contra-indicated in cases of powerful, otherwise healthy, subjects, especially those under forty-five years of age. In childhood and youth, also, alcohol appears to be of no service. 3. In all cases where valvular disease of the heart complicates pneumonia it should be avoided. Treatment by alcohol is, however, indicated in such cases as the following. 1. Where there is reason to suspect muscular degeneration of the heart, as in cases of chronic alcoholism, provided always that no valvular disease be present. 2. In all cases where the patient is over fifty years of age, and free from heart-disease. 3. In hypostatic pneumonia. 4. In all cases, except those with valvular heart-disease, after a crisis has been fairly passed. 5. In persons inclined to collapse, without respect to the heart's condition, as being the best means of warding off œdema of the lungs. If this have once set in, however, the further use of alcohol only prolongs life under hopeless conditions. He regards the unlimited and thoughtless treatment of every form of pneumonia with alcohol, not only as a professional error, but as altogether to be repudiated.

E. CLIFFORD BEALE, M.B.

17. *Page on Chinoidin and Capsicum in Intermittent Fever.*—Dr. R. C. M. Page (*New York Med. Record*, October 7, 1882) recommends 10 grains of powdered chinoidin, and 3 grains of capsicum, three times a day, in the treatment of intermittent fever. He thinks that chinoidin is nearly, if not quite, as good as quinine, and, of course, much cheaper. When powdered, it must be mixed with some inert substance, such as althæa, or the particles will soon coalesce again.

18. *Brown-Séquard on the Anæsthetic Action of Carbonic Acid Gas.*—Dr. Brown-Séquard (*Soc. de Biologie, Le Prog. Méd.* 1882, No. 45), having found that a stream of carbonic acid gas produced anæsthesia of the mucous membrane of the larynx, in further experiments found that a stream of gas, directed into the larynx of certain animals during a fit of epilepsy, stopped the fit, and a stream of gas thrown from below upwards on the trachea arrested respiration and put an end to the convulsions of strychnia poisoning. These results suggest that the action is not only local, but is upon the central nervous system. He proposes another experiment, in which part of the mucous membrane will be covered with glycerine, so as to protect it from the direct action of the gas. If that part be anæsthetic, the central nature of the phenomenon will be demonstrated.

R. SAUNDBY, M.D.

19. *Formula.*—The following formulæ are selected from the non-official formulary of the Dutch Society for the advancement of pharmacy (*New Remedies*, Sept. 1882).

Trochisci Iodoformi: Troches of Iodoform.—Iodoform, 50 grammes; sugar, in powder, 1,000 grammes; oil of peppermint, 1.5 grammes; tragacanth, powdered, 2.5 grammes; glycerine, 10 grammes; water, q. s. Mix the first four ingredients with the glycerine, and enough water to form a mass, and divide this into 1,000 troches. Each troche contains 0.05 grammes, or nearly three-fourths of a grain of iodoform.

Trochisci Cetrariæ: Troches of Iceland Moss.—Iceland moss sugar; orange-flower water, of each a sprinkling. Make troches, weighing 1 gramme (15½ grains) each. Dry them, and keep them in a stoppered bottle.

Unguentum Leniens: Cold Cream.—Olive-oil, 360 parts; white wax, 36 parts; spermaceti, 60 parts; rose water, 120 parts; tincture of benzoin, 24 parts; oil of rose, 1 part. Melt the first three ingredients together on a water-bath, allow the mixture to become nearly cold, then add to it, under constant stirring, the other three ingredients.

Unguentum Argenti Nitratis Compositum: Compound Nitrate of Silver Ointment.—Nitrate of silver, 1 part; oxide of zinc, 3 parts; balsam of Peru, 3 parts; lard, unsalted, 24 parts. Dissolve the nitrate of silver in a few drops of distilled water, and mix the solution with 12 parts of suet. Then, having mixed the oxide of zinc with the remainder of the suet, incorporate it with the first prepared mixture, and, finally, add the balsam of Peru.

Unguentum Ophthalmicum Compositum: (St. Yves') Compound Eye-Salve.—Red oxide of mercury, 15 parts; oxide of zinc, 6 parts; camphor, 5 parts; oil of almonds, 10 parts; lard, 140 parts; yellow wax, 24 parts. Mix the oxides and the camphor intimately with the oil of almonds, then incorporate with the lard and wax previously melted together, and allowed to cool.

Vinum Amarum Alkalisatum: Alkaline Bitter Wine. (Elixir Aurantiorum Compositum.)—Tincture of orange-peel (1 of orange-peel and 6 alcohol), 2 parts; carbonate of potassium, 1 part; sherry wine, 46 parts; extract of gentian, extract of centaury, lesser, extract of wormwood, extract of carduus benedictus, of each 1 part. Dissolve the carbonate of potassium in the sherry wine; add the extracts, and let the mixture stand for one day, occasionally agitating. Finally, add the tincture of orange-peel.

Vinum Amarum cum Spiritu: Bitter Wine with Alcohol.—Gentian, finely cut, 4 parts; red bark (Indian or Javanese), in coarse powder, 8 parts; orange-peel, deprived of the white layer, and finely cut, 1 part; canella, in coarse powder, 1 part; alcohol, 30 parts; sherry wine, 200 parts. Macerate the solids with the alcohol for twenty-four hours, then add the sherry, macerate for four days, strain, express, and filter.

Vinum Camphoratum: Camphor Wine.—Camphor, in powder, 1 part; acacia, in powder, 1 part; white wine, 44 parts; stronger alcohol, 4 parts. Mix them. It forms a white turbid liquid.

Vinum Cinchonæ: Wine of Cinchona (Laroche's Cinchona Wine.)—Red bark (Javanese or Indian) containing, at least, 6 per cent. of alkaloids, and powdered, 1 part; stronger alcohol, 4 parts; sherry wine, 20 parts; sugar, 16 parts; water, q. s. Macerate the red bark with 20 parts of water, for half an hour, then strain, transfer the residue to a displacement apparatus, and pour upon it the sherry wine. Allow the percolate to pass slowly, and, when the wine has disappeared from the surface, follow it by a mixture

of 4 parts of stronger alcohol, and 6 parts of water. Finally, percolate with water until the volume of the whole liquid amounts to 50 parts. Let this stand for a few weeks until it has completely settled, then dissolve it in the sugar, and filter.

Vinum Cinchonæ Ferratum: Wine of Cinchona and Iron. (Laroche's Ferrated Wine of Iron.)—Pyrophosphate of iron, soluble, 2 parts; citric acid, 1 part; water, 3 parts; wine of cinchona, 200 parts. Dissolve the pyrophosphate of iron and the citric acid in the water, add the wine of cinchona, and filter, if necessary.

MEDICINE.

RECENT PAPERS.

1. CHARLTON.—Sudden Death in the Third Week of Diphtheria. (*Lancet*, Sept. 1882, p. 515.)
2. BYERS.—Perforation in Enteric Fever. (*Brit. Med. Journ.*, Nov. 1882, p. 881.)
3. HUNTER.—Obstruction of the Bowels. (*Practitioner*, Oct. 1882.)
4. COCKLE.—Acute Strangulation of the Ileum. (*Brit. Med. Journ.*, Oct. 1882, p. 785.)
5. DRUMMOND.—Auscultation of the Mouth and Trachea. (*Brit. Med. Journ.*, Oct. 1882, p. 773.)
6. STEVENSON.—Spasmodic Asthma. (*Med. Times and Gaz.*, Sept. 1882, p. 392.)
7. HARRISON.—Primary Endocarditis. (*Brit. Med. Journ.*, Oct. 1882, p. 930.)
8. PEARCE.—On Consumption. (*Med. Times and Gaz.*, July 1882, p. 123.)
9. STEWART.—The Origin of Chorea. (*Brit. Med. Journ.*, Nov. 1882, p. 939.)
10. STURGES.—Acute Tuberculosis. (*Lancet*, Sept. 1882, p. 627.)
11. LASÈGUE.—Abnormal Somnolence. (*Four. de Méd. et de Chir. Prat.*, tome liii.)
12. BERNARD.—Epidemic and Contagious Pneumonia. (*Jour. de Méd. et de Chir. Prat.*, tome liii.)
13. POTAIN.—Supraclavicular Œdema. (*Le Progrès Méd.*, 1882, No. 42.)
14. ENGEL.—The Prodromic Stage of Bright's Disease. (*New York Med. Rec.*, Oct. 7.)
15. SAUNDBY.—Migraine with Paralysis of the Third Nerve. (*Lancet*, Sept. 2.)
16. SAUNDBY.—The Albuminuria of Epilepsy. (*Med. Times and Gaz.*, Oct. 14.)
17. DEMANGE.—Loss of Teeth in Tabes Dorsalis. (*Jour. de Méd. et de Chir. Prat.*, tome liii.)
18. SEE.—Infectious Pneumonia (*L'Union Méd.*, Nos. 76-79, 1882.)
19. MEIGS.—On Albuminuria. (*Medical News*, October 21.)
20. GRANCHER.—The State of the Lung in Pleurisy. (*L'Union Méd.*)
21. FLINT.—Gout and Lead-Poisoning. (*Bost. Med. and Surg. Journ.*, Oct. 19, 1882.)
22. ROQUES.—Symmetrical Gangrene in Bright's Disease. (*Gaz. Hebdom. de Méd.*, No. 44, 1882.)
23. BARR.—Reduplication of the Cardiac Sounds. (*Liverpool Med.-Chir. Journ.*, July 1882.)

1. Charlton on Sudden Death in the Third Week of Diphtheria.—Mr. Charlton gives the outline of a case of sudden death, occurring in diphtheria, in the *Lancet*, Sept. 1882, p. 515. There was nothing extraordinary about the case; it was treated with large doses of chlorate of potash and perchloride of iron, warm poultices externally, and good diet. On the second day, the patient being cyanotic, tracheotomy was performed, with immediate good result; after which, recovery was uninterrupted till three weeks

after the commencement of the illness, when the child, while at dinner, suddenly fell and was taken up dead. Mr. Charlton asks for an explanation of this fatal incident.

2. *Byers on Perforation in Enteric Fever.*—Dr. Byers, in a paper read at the annual meeting of the British Medical Association at Worcester (*British Med. Journal*, November 1882, p. 881), calls attention to the great frequency of perforation in typhoid fever, it being found on the average in one-fifth of the fatal cases. He has found that this may be dreaded in all cases in which there are any signs of severe or deep ulceration of the bowel; such are, the type of the disease being unusually severe, extreme tympanites or constipation; a single deep ulcer paralysing the action of the bowel and allowing an enormous accumulation of flatus, or causing constipation; continued elevation of temperature after the third week; severe tremor; protracted headache in the early stages; and lastly, the persistence of the *tâche cérébrale* during convalescence. A case terminating fatally from perforation is cited, illustrating most of these points. From the great fatality of this complication, Dr. Byers strongly urges, when one or more of the above symptoms are present, that the following precautionary measures should be adopted. The patient is to be kept perfectly quiet in the dorsal recumbent position. All food is to be given in the liquid form, and purgatives are not on any account to be administered, and opium must be given regularly; this places the ulcers in a better condition for healing, and the chance of rupture of their floors, from sudden movements of the intestines, is minimised.

3. *Hunter on Obstruction of the Bowels.*—Dr. Dickson Hunter records in the *Practitioner*, October 1882, the case of a man, aged 50, who came under observation two days after the onset of the disease. The abdomen was greatly distended, so much so that he could neither sit up nor lie down. The other usual signs of obstruction were present. An attempt was made to pass up by the rectum first a long tube, and then a No. 10 catheter, but they each met with an obstruction that was not to be overcome. The respiration becoming greatly embarrassed, it was determined to puncture the abdomen; this was done in the left nipple-line three inches below the edge of the ribs, where there was a particularly prominent looking part. A large quantity of flatus escaped. The following day, as the distension had re-accumulated, chloroform was administered, and Dr. Hunter passed his hand up the rectum; eight inches from the anus he discovered a slight projection with a central depression, something like a soft os uteri. Into this depression he insinuated his finger, and gradually dilated it, slowly pushing it upwards at the same time; sixteen inches from the anus, the hand came into a large space filled with pultaceous matter. A tube was now passed up the arm and hollow of the hand, and through this an enormous quantity of dark green semifluid matter and flatus escaped. In a fortnight's time the patient was sufficiently well to leave the hospital, and though a year has elapsed, there has been no sign of recurrence of the obstruction.

4. *Cockle on Acute Strangulation of the Ileum.*—In the *Brit. Med. Journ.*, October 1882, p. 785, Dr. Cockle reports the case of a coach-painter's assistant, aged 17, who, three days previously to coming under observation, after drinking to excess, woke up with an intense pain referred to the hypogastrium and right iliac region; during the morning there

was a slight action of the bowels; before midday, vomiting of a greenish fluid occurred. On the third day, when Dr. Cockle first saw him, the pain remained in the same position; there was slight dulness over that part of the abdomen, and on palpation there was a sense of resistance; in other parts the abdomen was uniformly, though not excessively, distended. The sites of hernia, common and uncommon, were examined with negative results. The vomited matter became fluid and dark from admixture of blood; it was not feculent. Very little urine was passed during the first two days, and none on the third, on the evening of which day the patient died. At the necropsy the obstruction was found to be in the ileum, a piece of which, fourteen inches long, was effectually cut off from the remainder of the intestine, above and below, by a diverticulum of the ileum, communicating with the lumen of the gut in two distinct places within an inch of each other. The obstructed part of the bowel was intensely congested, inflamed, covered in great part with thick lymph, and distended with effused blood. During life, the diagnosis lay between acute strangulating intussusception and acute strangulation of the intestine by a band or diverticulum; the absence of blood-stained mucus inclined Dr. Cockle to the latter, in spite of the presence of the dulness and resistance at the seat of pain. Had this case come under Dr. Cockle's care at an earlier period, he considers that surgical treatment would have not only been justifiable, but imperatively demanded. The diminished secretion of urine he considers due to some inhibiting influence exerted through the sympathetic system of nerves; this sign, when present, may assist the diagnosis.

5. *Drummond on Auscultation of the Mouth and Trachea.*—Dr. Drummond, in a paper read at the last annual meeting of the British Medical Association and reported in the *British Med. Journal* of October 1882, p. 773, states that he heard on his own person, after violent exertion, a whiff synchronous with the cardiac systole, audible during expiration, the mouth being open. This led to an examination of cases of aortic aneurism. The patient being in the recumbent position, the bell-piece of the binaural stethoscope is introduced into the mouth to receive the expired air; should the sign be present, the expiration will appear to be interrupted at each beat of the heart by a whiff. Out of twenty-three cases of aortic aneurism so examined, the whiff was present in seventeen. Dr. Drummond has also gained valuable information from auscultation of the tracheal air-column in conjunction with percussion. The patient, sitting before the auscultator, is directed to hold a specially constructed oval piece of the binaural stethoscope in his mouth, and to breathe very quietly into the tube, taking care not to allow any part of the latter to touch his mouth; the observer, then, with the ear-pieces adjusted, percusses the front of the chest. By this method, great differences in the percussion-note are detected readily; and Dr. Drummond has been able to predict phthisis before there were really any marked changes by which the condition could be diagnosed. Pleurisy, pneumothorax, and other abnormal conditions of the chest, can also be detected in this way; and he strongly recommends its practice to all clinical workers.

6. *Stevenson on Spasmodic Asthma.*—In the *Med. Times and Gaz.*, Sept. 1882, p. 392, is a review of a thesis by Mr. W. E. Stevenson on spasmodic asthma. The author, being a sufferer from asthma himself, does not agree with the ordinarily received

opinions as to the origin and nature of this disease; he thinks it depends rather on a spasmodic contraction of the muscles of inspiration, by which the movements of the chest appear to be arrested at the conclusion of one of the deepest of inspirations, and spasmodically held in that position. Mr. Steavenson attributes the cause of the attack to an abnormal excitability of the vagus, or of the respiratory nerve-centre; he hints that another common cause yet unrecognised may be in the electrical condition of the atmosphere. As regards the treatment, the hypodermic injection of morphia is confidently recommended to relieve an attack; this never having failed in the author's hands, its only drawback being that the doses have gradually to be increased. The thesis is the more valuable from being founded on the personal experience of the disease of which it treats.

7. *Harrison on Primary Endocarditis.*—In the *Brit. Med. Journ.*, October 1882, p. 930, is a paper read by Dr. A. J. Harrison at the annual meeting of the association at Worcester, in which he records four cases of idiopathic endocarditis occurring in patients of from fourteen to twenty-five years of age; in each there was a history of the father having had one or several attacks of acute rheumatism. In only one of the four was there any symptom of acute rheumatism, viz., profuse sour-smelling perspiration. One case is recorded by M. Barth, of endocarditis occurring in a fœtus without the mother suffering from rheumatism. It is stated by several other authorities that idiopathic endocarditis may occur, but Dr. Harrison is the first to place such cases on record, and he thinks that it is much commoner than is ordinarily supposed, many persons probably suffering from it without being aware of it; and he is of opinion that it may be the only symptom of an attack of acute rheumatism. In these cases the treatment by salicylate of soda, where it could be borne, was most effectual in arresting the disease, and preventing subsequent changes in the valves of the heart.

RICHARD NEALE, M.D.

8. *Pearse on Consumption.*—Dr. Pearse, in the *Med. Times and Gaz.*, July 1882, p. 123, has recorded some observations on the premonitory symptoms and signs of consumption. The commonest are a feeling of coldness all over, or coldness of the extremities only; pain at the epigastrium after taking food; loss of appetite; a feeling of tiredness or weakness; disturbance of the menstrual function; a peculiar development of dark pigmentation of the skin; peculiarities of appetite, such as a fondness for salt meat, pickles, and vinegar; anatomical peculiarities, especially marked in the superior maxillary bones; clubbing, furrows, or brittleness of the nails; peculiarities of the teeth, especially of the upper incisors, which decayed early; a large amount of hair on the scalp. His remarks are continued in the number for August, p. 150, where it is stated that, in people peculiarly liable to consumption, the upper maxillary and nasal bones have an exaggerated tendency to one or other side. The head and neck are not well set up, the neck leaning somewhat forward, and sunk between the shoulders. The hands are either exquisitely fine, or unduly large. The thorax is small, or the body generally diminutive for the age. Dr. Pearse, under the heading 'Form of Phthisis', states that it should not be recognised as a specific existence, but a deviation only from the greater natural and prevailing order of healthy evolution. He treats the tubercle-bacillus as only a minor sequence, and not as a cause of con-

sumption. As regards treatment, on p. 185, he states that, in the pre-phthical and early phthical stages, he has found great benefit from a mixture consisting of hydrochloric acid, arsenic, and quinine. Under this treatment, the indigestion, feeling of weakness, and loss of appetite generally disappear. These symptoms are in many cases treated best by change of air or galvanism. Many patients long for the smell of seaweed, and find it refreshing. To meet this, Dr. Pearse has tried a pill composed of three grains of the dried and powdered bladder of the fucus vesiculosus, with one twenty-fourth of a grain of arsenious acid, or a little sulphate of manganese and sea-water in the quinine and acid mixture, with great benefit. This was first suggested by the fact that the heart of a shark, after it has been taken from the body, will contract on irritation an hour longer in a solution of sulphate of manganese and sea-water than in air; and that, until the day when exact analysis shall tell us what is the difference in composition between one who passes into phthisis, and one who does not, we can only seek our remedies by the analogy and the instincts of patients.

9. *Stewart on the Origin of Chorea, etc.*—Mr. W. Stewart, in the *Brit. Med. Jour.*, Nov. 1882, p. 939, in a paper entitled, A New Theory of the Unity of Origin of Rheumatism, Carditis, and Chorea, states that he has founded it on clinical observation of such cases as severe swelling of various joints following immediately on follicular tonsillitis or chorea. The pith of the theory lays in the introduction of a cell to the general current of the circulation, to which cell the name of pathogenic is given; in its nature and appearance it is supposed to resemble a white blood-corpuscle; a devitalised white blood-corpuscle, which acquires at the same time, and to the same extent as it loses its vitality, a pathogenic power. It is introduced to the blood by the well-known process of absorption through the medium of a lymphatic vessel and gland, and is manufactured from a healthy corpuscle by a degree of local inflammation which stops short of tubercle-cells on the one hand, or of ordinary pus-cells on the other; the rheumatic, the tubercle, and the pyæmic-cells differing from one another in the degree of devitalisation only. If the capillary circulation and nutrition of the brain be affected by this cell, we shall have disturbance of its function, and thus the nervous phenomena—both psychical and physical—of chorea arise; when the nutrition of the heart is affected, we shall have the cardiac symptoms; and so on in like manner with the lungs, the joints or the liver. The question, which of these affections will first have birth? is decided by certain existing or determining conditions peculiar to the idiosyncrasies of the case, or its surroundings.

10. *Sturges on Acute Tuberculosis.*—Dr. Octavius Sturges, in the *Lancet* for September 1882, p. 427, records the case of a lad, aged 17, with a consumptive history, who, having caught cold, was confined to his bed for a fortnight before coming under observation, the symptoms being coughing, great expectoration, repeated nose-bleeding, and profuse sweating, especially at night. He lost much flesh, but was sufficiently well to get up. For the first fortnight after admission, his condition indicated extreme depression; the temperature ranged from 102 deg. to 104.6 deg.; there were complete anorexia, sleeplessness, night-sweating, wearing cough, and rapid wasting. After this, slight signs of improvement were apparent, which gradually increased till he was pronounced convalescent. When he was at his worst, examination

of the chest indicated only some small bubbling râles at the left base; he was then treated with ten-grain doses of hypophosphite of soda every four hours. The only point in this case, negating the diagnosis as acute tuberculosis, is that he did not die. Dr. Sturges is convinced that the symptoms were due to this disease; and, as confirmatory of this, he points out that the tuberculous can be recognised by their peculiar features; that certain localities and modes of living are at least hostile to tuberculosis; and that, by having recourse to such places and modes of living, a threatened attack may be averted.

R. NEALE, M.D.

11. *Lasègue on Abnormal Somnolence*.—M. Lasègue (*Journ. de Méd. et de Chir. Prat.*, vol. liii, p. 437) relates several cases of abnormal somnolence. A bar-keeper was often taken with an irresistible desire to sleep while serving his customers, and, putting his glasses on the table, slept for a few minutes. A porter, in a glass merchant's, would stop in the street, lean against the wall with his basket on his shoulder, and sleep; then, waking in a few instants, would rub his eyes and go on his way. A young girl felt a great disposition to go to sleep in church, but managed to get home and go to bed, where she remained asleep for three days. A young farmer was out hunting, when he sat down in a field and went to sleep, his companions being unable to awaken him. He awoke in five or six hours, but the next day he went to sleep at the same time, and ever since has done so every day. This was a hypnotic sleep, which could be brought to an end by blowing on the face. He was nevertheless difficult to mesmerise in the ordinary sense. A young girl went to sleep always at eight o'clock, day and night, with or without a clock. A Belgian countess went to sleep regularly at nine o'clock, whatever she might be doing, and remained until the following day in the position she then occupied. Here catalepsy was joined to hypnotism. She recovered after two years.

12. *Bernard on Epidemic and Contagious Pneumonia*.—Bernard (*Journ. de Méd. et de Chir. Prat.*, vol. liii, p. 447) reports an epidemic of pneumonia which began in May in three adjoining houses, in the upper part of the village, affecting children of three to five years. Then it appeared in the lower part of the village in two children of three to five, brother and sister, who were taken at first with intense fever and delirium, and pneumonia appeared at the apex; both recovered. Then it occurred in a woman aged 38, who had often gone to the house of the first patient; in her also the apex was involved, but she recovered. Then another child who lived near the second group had right broncho-pneumonia, and recovered. Only one died in convulsions; he was a year old. All but one had pneumonia of the apex. The epidemic terminated in less than three weeks. Eight years ago, a Parisian family hired a house in the upper part of the town. The husband, 60 years of age, died of pneumonia in six days, his wife died eight days later, and Bernard himself had a slight pneumonia at the apex.

13. *Potain on Supraclavicular Œdema*.—M. Potain read a paper at the Académie de Médecine (*Le Progrès Méd.*, 1882, No. 31) upon a 'prominence situated in one or other of the supraclavicular regions, and usually in both, which transforms the habitual depression in this place to a convexity elevated two, or even three, centimètres above the plane of the neighbouring parts, oval or triangular in shape, ill-defined at the margin, with blunted angles and contours as ill-marked to the touch as to

the eye. This prominence is contained in the space between the clavicle, the trapezius, and the sternomastoid.' It is painless, non-fluctuating, and does not pit on pressure. It is connected with the rheumatic diathesis and gout. The same kind of œdema is met with in other parts, particularly in the hands. It leads to an increase of the subcutaneous fat after some time.

14. *Engel on the Prodromic Stage of Bright's Disease*.—Dr. Hugo Engel (*New York Med. Record*, Oct. 7, 1882) maintains that albumen is rarely found in the urine of persons who have not a tendency to Bright's disease. He gives a case with a family history of Bright's disease, in which a heavy meal was always followed by albuminuria, while in nineteen other cases, without predisposition, albumen was found in three, and in these only exceptionally. He also gives (1) a case, without antecedents, who passed albumen after drinking too much beer; another (2) also without antecedents, of dyspepsia and albuminuria; and (3) of one whose albuminuria depended upon his being excited. He also refers to another case, with family predisposition, in which rapid eating would bring on albuminuria. Finally, he gives an account of a young painter who had frequent albuminuria and dyspepsia, without lead-colic, and who was killed by a fall from a scaffold. The kidneys were large; there was endo-arteritis, and hypertrophy of the muscular coat of the small vessels. He recommends as prophylactic treatment diminution of the quantity of the food, especially of its nitrogenous elements, avoidance of chills, and the use of albuminate of tannin to check the albuminuria, and benzylo-bromide to promote the elimination of nitrogenous matter. [The author's cases can scarcely be regarded as affording much evidence of the truth of his proposition, that albuminuria is only rarely met with apart from a predisposition to Bright's disease, as, out of six cases in which albumen was frequently found, there was evidence of predisposition in three only.—*Rep.*]

15. *Saundby on Migraine with Paralysis of the Third Nerve*.—Dr. Saundby (*Lancet*, Sept. 2, 1882) reports a case of migraine in a young woman, which had occurred at intervals ever since she was twelve years of age, and had always been accompanied by complete paralysis of the left nerve. This paralysis passed off in a few days, but there remained a slight degree of permanent ptosis, complete paralysis of the superior rectus, slight dilatation of the pupil, and vision = $\frac{1}{5}$. The patient had enjoyed otherwise good health, was well developed, and well nourished, and had never suffered from fits.

16. *Saundby on the Albuminuria of Epilepsy*.—Dr. Saundby (*Med. Times and Gaz.*, Oct. 14, 1882), after referring to the contradictory statements of previous observers, says that, out of twenty-seven observations of the urine of twenty chronic epileptics, albumen was found on twenty-two occasions. The test employed was simply boiling, and acidulating with acetic acid. The quantity varied from a copious precipitate to a faint trace, but, as a general rule, was small. Five examinations were made directly after a fit; of these albumen was absent in two. He does not regard the albuminuria as having any distinct relation to the fits, but connects it with the age of his patients (the average age being eighteen), the dyspepsia and anæmia which were so common among them, and the fact that the urine was examined after they had been walking. Pulse-tracings were taken in ten cases, but in two only was the tension high.

17. *Demange on Loss of Teeth in Tabes Dorsalis.*—Demange (*Jour. de Méd. et de Chir. Prat.*, vol. liii, p. 456) records two cases of locomotor ataxy, in which there had been rapid and spontaneous loss of, in one case, all the teeth of the upper jaw, in the other in all the teeth on one side of the upper jaw. The first case had suffered from lightning pains in the face; and, in the second, there was anæsthesia and analgesia in the whole trifacial area.

18. *Sée on Infectious Pneumonia.*—M. Germain Sée (*L'Union Méd.*, Nos. 76-79, 1882) distinguishes three varieties of infectious pneumonia: 1, malarial pneumonia; 2, erysipelatous pneumonia; 3, typhoid pneumonia. By the latter he understands a form of typhoid fever which finds its chief expression in inflammation of the lungs. The kidneys, pleura, pericardium, etc., are often involved. The spleen is enlarged; there may be icterus. Ordinary croupous pneumonia he considers to be local, not an infectious, disease.

19. *Meigs on Albuminuria.*—Dr. Arthur V. Meigs read a paper before the College of Physicians of Philadelphia (*Medical News*, Oct. 21st, 1882), based on sixty-two cases of albuminuria, of which he had notes. Three of these cases, still alive, were found more than eight years ago to have albumen and casts in their urine. A careful study of his cases had led him to the following conclusions. 1. In no ordinary uncomplicated case of Bright's disease should a prognosis of speedy death, or even of incurable disease, be given; for he has related cases in which the disease was chronic, lasting more than two years, and which ended in complete recovery, and others, in which the person affected lived nearly nine years. 2. Dyspnoea, usually taking the form of renal asthma, is much more common than is usually supposed, and, when properly appreciated, is a valuable diagnostic sign of the disease; also severe coryza is a complication or accompaniment, and has a diagnostic value. 3. Bright's disease, as a cause of death, is on the increase. 4. It is a very common cause of the deaths of old people, probably being the direct cause in many deaths reported as of old age. 5. The passage of gravel, even when microscopic in size, but particularly if large enough to cause nephritic colic, is a prolific cause of the disease. 6. The occurrence of tube-casts in the urine, without, or in advance of, the presence of albumen, is very common; and, *vice versa*, persons may die of Bright's disease, and the most careful examination fail to show any tube-casts, although there may be albumen constantly present in the urine. 7. The abuse of alcohol is certainly a cause of kidney-disease, as proved by a case related by Dr. Meigs, in which it again and again caused hæmorrhage from the kidney, with the temporary presence of albumen and tube-casts in the urine, disappearing again with the cessation of its consumption. In the discussion that followed, Dr. M. P. Harris drew attention to the diagnostic importance of vomiting. Dr. H. C. Wood thought there might be Bright's disease without either albumen or casts in the urine. Dr. Tyson would not deny that there might be such cases, but he had never met with one. He considered uræmic convulsions of very bad prognosis in contracting kidney. He could not think persistent albuminuria consistent with a healthy state of the kidney.

20. *Grancher on the State of the Lung in Pleurisy.*—M. Grancher (*L'Union Méd.*) believes that the physical signs over the upper part of the chest are not attended to sufficiently in pleurisy. Thus, if the lung be healthy, the subclavicular tympanism

will coincide with increase of the vocal vibrations and respiration; if it be congested, the respiration is abnormal, generally weak, and this is most often of tubercular origin. Finally, both the vocal vibrations and the respiration may be diminished from various pathological causes, most usually from œdema of the lungs and compression of the bronchi.

21. *Flint on Gout and Lead-Poisoning.*—Dr. Austin Flint (*Boston Med. and Surg. Jour.*, Oct. 19, 1882) has published a case of Bright's disease with hypertrophy of the heart, lead-poisoning, and gout. The patient had lead-palsy, and has had several attacks of colic. His ankle was swollen, he had gouty deposits in the ear, and had had several attacks of regular gout in the toe. There was no family history of gout, but the patient had been in the habit of drinking 'a good deal of ale'.

22. *Roques on Symmetrical Gangrene in Bright's Disease.*—M. Roques (*Gaz. Hebdomadaire de Méd. et de Chir.*, No. 44, 1882) reports a case of symmetrical gangrene, affecting all four extremities, in a patient admitted for cardiac failure, in whom he noted intense pulmonary congestion, enlargement of the liver, albuminuria, and tumultuous cardiac action. Her vision was dim, but the ophthalmoscope showed the fundus to be normal, except that the retinal vessels were rather slender. For some time she had suffered from her fingers becoming pale, and as if dead. After being a few days in the hospital, her toes became livid and cold, and similar patches appeared on the legs, though the dorsalis pedis arteries pulsated, but perhaps rather feebly. The upper extremities soon presented similar phenomena; and ultimately the little fingers of the right hand, and the toe of the same side, became gangrenous. The patient died of heart-failure in spite of all remedies, including oxygen and electricity. At the necropsy, a ring of vegetations was found around the aortic valves; the heart was hypertrophied; the mitral valve was healthy; the right lung was hepatized; the liver was nutmeggy; the spleen was healthy; both kidneys presented an advanced degree of interstitial nephritis; the arteries of the extremities were normal and free from emboli; no infarcts were found anywhere. The condition of the central nervous organs is not reported. M. Roques imagines that this symmetrical gangrene is in some obscure way associated with or dependent upon the renal disease. In support of this hypothesis, he alludes to the vaso-motor disturbances met with in Bright's disease, and instances œdema of one half of the body, deadness of the fingers, and certain forms of pruritus.

23. *Barr on Reduplication of the Cardiac Sounds.*—Dr. James Barr (*Liverpool Medico-Chir. Jour.*, July 1882) explains reduplication of the cardiac sounds by the asynchronous action of the ventricles, but differs from those who regard this asynchronism as the result of delay on the part of the ventricle which has to overcome the greater pressure. 'The ventricle, which is relatively best supplied with blood, and which best retains its muscular irritability, has the inhibitory action of the vagus first overcome, first raises its intraventricular pressure, and tensely closes its auriculo-ventricular valve, which gives rise to the first element of a double first sound. It does not necessarily follow that the ventricle which begins will first end contraction, for the period of systole varies. The period of systole depends on the mass to be moved, the power of the ventricle to move it, and the resistance in front; and, *cæteris paribus*, the greater the resistance the longer the systole. Frequently the ventricle which begins contraction has

proportionately the greatest amount of work to do; so its systole is protracted, and hence a double second sound is not a necessary accompaniment of a double first. Again, both may commence their systole together, but one, having, in proportion to its power, relatively less work to do, may end before the other; hence, a double second sound.'

R. SAUNDEY, M.D.

SURGERY.

RECENT PAPERS.

1. ZESAS.—Extirpation of the Spleen. (*Arch. für Chir.*, Band xxviii, Heft 1.)
2. GEFFRIER.—Gonorrhœal Cystitis. (*Rev. de Chir.*, June 1882.)
3. BRUGLOCHER.—Resection of Several Ribs in Empyema. (*Aerztlich. Intell.-Blatt*, No. 31, 1882.)
4. WEST.—Wound of the Pericardium, Heart, and Stomach. (*Lancet*, July 1882, p. 55.)
5. WORTHINGTON.—Puncture for Intestinal Obstruction. (*Brit. Med. Jour.*, July 1882, p. 167.)
6. BATTEN.—Belladonna in Hernia. (*Brit. Med. Jour.*, July 1882, p. 87.)
7. THOMSON.—Refraction of the Patella. (*Brit. Med. Jour.*, Aug. 1882, p. 358.)
8. BRYANT.—Popliteal Aneurism cured by Dr. Fleet Spiers's Artery Compressor. (*Brit. Med. Jour.*, October, p. 721.)
9. MARSH.—Bone-setting. (*Brit. Med. Jour.*, Oct., p. 663.)
10. MORRIS.—On Ranula. (*Med. Times and Gazette*, Sept., p. 355.)
11. HARRISON.—Litholapaxy. (*Brit. Med. Jour.*, October, p. 669.)
12. WILKES.—Flexible Probe for Detecting Bullets. (*Med. Times and Gazette*, July, p. 257.)
13. MUSSEY.—Treatment of Chronic Cystitis by the Vesical Curette. (*Columbus Med. Jour.*, Sept.)
14. GARRISON.—Dry Gangrene from Local Application of Carbolic Acid. (*Western Med. Rep.*)
15. DUNCAN J.—The Treatment of Fresh Wounds. (*Edin. Med. Jour.*, July.)
16. OLLIER.—Subperiosteal Amputation and Disarticulation. (*Rev. de Thér.*, May 15th.)
17. RASUMOWSKY.—Rare Case of Foreign Body in the Bladder. (*Proceedings of the Med. Soc. of Kazan*, March 1882.)
18. HACK.—Hereditary Fissure of the Tongue. (*Monatsschr. für Prakt. Dermatol.*, April 1882.)
19. WHITMAN.—Sponge-Grafting. (*New York Med. Record*, Oct. 9.)

1. Zesas on Extirpation of the Spleen.—Dr. D. G. Zesas of Zurich, in an article on extirpation of the spleen in man and in animals (*Archiv für Chir.*, Band xxviii, Heft 1), points out that the function of the spleen is not of very great importance in maintaining life and preserving the normal constitution of the blood. Early in 1881, he proved by a series of experiments on rabbits, that animals deprived of the spleen may live on without inconvenience, and that this organ may be represented by other structures, particularly lymph-glands that have undergone hypertrophy. Thirty cases of splenotomy on man have been collected by the author. Of ten of these cases in which the operation had been performed for morbid growths or hypertrophy, four were successful. In the first recorded case of splenotomy practised by Zuccarelli in 1549, the patient is stated

to have recovered; and two recent cases under Péan of Paris, one of cystic degeneration of the spleen, and the other of splenic tumour, were also successful. In the other cases, twenty in number, the spleen was removed in consequence of injury, and of its protrusion through a rent in the abdominal wall. It is recorded that in every one of these traumatic cases the patient recovered. Although these scanty statistics speak rather for than against splenotomy, still, the author holds, this operation has its dark side; and until we know more of its results, and have carefully and rigorously tested it, no surgeon can justifiably advocate its claims. It can only be applied, it is thought, in some few special cases. Although absence of the spleen need not itself be a fatal condition, still the anatomical connections of this organ, and the possibility of the existence of extensive adhesions in cases of its disease, necessarily render splenotomy a very dangerous operation. The patient's hepatic and pulmonary organs should be carefully examined, and the general condition be noted in every case where the operation may be suggested. If the patient be cachectic, phthisical, or strumous, the idea of operative interference should be rejected; for in conditions of this kind the lymph-glands are usually involved, and on the normal state of these compensatory organs the success of splenotomy mainly depends. The operation is contra-indicated also by the existence of extensive splenic adhesion, and by decided symptoms of cirrhosis of liver. In discussing the different morbid conditions of the spleen, with regard to the indications for splenotomy, Dr. Zesas points out that carcinoma of this organ is usually secondary. Tubercular disease of the spleen, whether in the form of grey miliary tubercle, or in that of yellow cheesy masses, cannot be diagnosed during life. In those cases of wandering, prolapsed, or dislocated spleen, for the treatment of which Kuchenmeister advocated splenotomy, it would be advisable, Dr. Zesas thinks, to try quinine internally, and external appliances such as abdominal belts, before having recourse to such an extreme measure. Hydatid disease of the spleen will be best treated by puncture and injections. Splenic hypertrophy is in most instances a complication of some disease of the cardiac, pulmonary, or hepatic systems. It is possible to make out splenic hypertrophy, and to distinguish from any morbid growth in this organ; but it is very difficult to decide whether this hypertrophy be idiopathic or the result of disease of the blood, or of some other organ. In cases of idiopathic splenic hypertrophy, the indication for operation might be regarded as more favourable. The operation, however, should be performed before the patient is much exhausted. The prognosis of idiopathic splenic hypertrophy, according to Grisolle, is very bad. The patient suffers from palpitation and vomiting, loses strength rapidly, and often becomes dropsical. Splenic hypertrophy from malarial cachexia, hepatic cirrhosis, or leukæmia can be treated only by internal remedies and baths. If the enlarged spleen give rise to strangulation symptoms, or be ruptured through injury, splenotomy might be performed as a desperate measure for saving life. The author concludes that splenotomy is justifiable in but very few conditions of disease of the spleen. When performed, the surgeon should direct particular attention to the securing of the pedicle, and the tying of all vessels. In two of the six fatal cases, death was due to hæmorrhage; and in another, the tail of the pancreas was found at the necropsy to have been included in a ligature. In Péan's two successful cases, much care

was taken to prevent hæmorrhage, and but very little blood was lost. The general condition of the patient should be considered, and every possible effort be made to avoid the sides of infection.

2. *Geffrier on Gonorrhœal Cystitis*.—M. P. Geffrier, who, during 1881, observed many cases of gonorrhœal cystitis under the care of Professor Guyon, at the Necker Hospital, directs attention, in a contribution to the June number of the *Revue de Chirurgie*, to certain points relating to the course of this affection. The duration of gonorrhœal cystitis, it is stated, cannot be fixed with any certainty, for no other affection is more irregular. In some cases the cystitis appears during the acute stage of gonorrhœa, and ceases at the end of this stage without any special treatment. But in most instances the vesical affection survives the acute urethral manifestations, and persists for a long time when the urethra is the seat of merely a slight and thin discharge, or indeed quite free from discharge of any kind. When the cystitis, as is not unfrequently observed, lasts for months, temporary remissions may occur, hæmaturia ceasing for a time, and then returning without any appreciable cause. In the majority of cases gonorrhœal cystitis has no tendency to spontaneous cure. There is no difference with regard to symptoms between recent and persistent cystitis. In each case the patient suffers from like pains, and from frequent micturition and tenesmus. The hæmaturia is as well marked in the chronic as in the acute form, and in both forms there is an absence of fever and of general symptoms. Abnormal frequency in micturition often persists after successful treatment as a last trace of the cystitis, denoting a certain degree of irritability of the neck of the bladder, which is slow to disappear, and may become the starting-point of a fresh attack of cystitis in case of any subsequent indulgences in venereal excess or in drink. The fresh cystitis will be of the same character as the previous attack. Relapses of this kind, which may be produced after intervals of some years, and even without any fresh urethral manifestation, form a remarkable feature in the clinical history of gonorrhœal cystitis. The symptoms of prostatitis have not the least resemblance to those of gonorrhœal cystitis. In the former affection, the pains radiate from the perinæum along the rectum, and are not localised, as in cystitis, to the hypogastric region and the navicular fossa. The tenesmus of prostatitis is rectal, that of cystitis vesical. Finally, hæmaturia is not met with in prostatitis unless the mucous membrane of the urethra have been injured by attempts at catheterism, and then this symptom never presents the particular aspect which is to be observed in the hæmaturia of gonorrhœal cystitis. In cases of inflammatory affection of the prostate, rectal examination alone should prevent the surgeon from committing any great error. The gonorrhœal origin of the cystitis may always be readily made out in cases where there has recently been a discharge; but where there has not been an attack of gonorrhœa for several months or years, the etiology becomes doubtful. It will be almost always found in these cases that some abnormal condition has persisted since the last attack of gonorrhœa, either some gleet, or a slight scalding on the part of the urethra, or slightly increased frequency in micturition or transient pain at the end of this act on the part of the bladder. Gonorrhœal cystitis being essentially an hæmorrhagic affection, it is not unlikely to be confounded with calculous hæmaturia and with tubercular cystitis. The fact that the symptoms set up in a calculous subject by striking or active exer-

cise are but of short duration, and that the pain, frequency of micturition and hæmaturia cease with their cause, should enable the surgeon to establish the diagnosis without hesitation. In the case of tubercular cystitis the diagnosis is much more difficult. The pain in this affection is increased in intensity during and at the end of micturition, but usually it does not cease altogether in the intervals. In gonorrhœal cystitis, except in its very acute form, where the pain is almost continuous, there is a remission in the intervals of the acts of micturition. The pain and increased micturition are more likely to become more intense during the night in the tubercular than in the gonorrhœal form cystitis. Tubercular cystitis is sometimes preceded by profuse hæmaturia, analogous to the premonitory hæmoptysis of pulmonary phthisis. Such hæmaturia, abundant, occurring without appreciable cause, and in the absence of any other urinary disturbance, is never observed in connection with gonorrhœal cystitis. In doubtful cases of cystitis the lungs should be carefully examined, and also the prostate and vesiculæ seminales. In most of the cases of tubercular cystitis, there is a co-existence of vesical and of genital tuberculosis. It is pointed out, and a case is reported to prove the statement, that gonorrhœal cystitis may become the starting point of vesical tuberculosis. In conclusion, M. Geffrier advocates, as the best treatment of gonorrhœal cystitis, frequently repeated injections of solutions of nitrate of silver. W. JOHNSON SMITH.

3. *Bruglocher on Resection of Several Ribs in Empyema*.—Dr. Bruglocher of Schabach (*Aerzt. Intell.*, No. 31, 1882) contributes a paper on this subject, advocating the practice of resection of several ribs in cases of long-standing empyema in adult patients. He regards the excision of a small piece of rib, as accessory to the ordinary method of opening the pleural cavity, as accepted by the profession at the present time; the proceeding being a matter of indifference to the patient, but of decided value in its results. The ultimate results of operation for relief of empyema are found to be uniformly more satisfactory in children than in adults. The explanation of this fact he finds in the greater elasticity of the chest-walls, which adapt themselves to the diminished size of the compressed lung, and thus assist in lessening the size of the pleural cavity. This retraction of the chest-walls can only take place to a very limited extent in the more rigid adult thorax, and hence the recovery is prevented by a purely mechanical agency, which admits of removal by mechanical means. Resection of ribs has generally been undertaken only as a means of facilitating the continued escape of pus from a suppurating pleura; here, however, one has to do with a plastic operation, the result of which depends, amongst other things, upon the mathematical exactness with which it is carried out. Several authors have practised and recommended this method, which was first suggested by Simon. As the result of an investigation into the work of several authors, Dr. Homen of Helsingfors lays down the rule that, in cases where two to three months have passed between the commencement of the disease and the formation of a fistula, and where recovery has not taken place in from four to five months afterwards, no hope can be entertained of recovery by ordinary means. The details of a case are related in which a simple serous pleurisy in a man, aged 45, was treated at first by puncture, with apparent success. Six months later, a painless swelling became developed in the right

side in the axillary line, dulness and absence of respiratory sounds being noted, extending as far upwards as the middle of the shoulder-blade. Its contents being found to be purulent, the tumour was incised, three months after its first appearance, and a portion of the eighth rib, about one inch, removed. The whole operation and subsequent treatment of the wound were carried out strictly antiseptically, and the discharge from the opening was but very slight, but recovery did not take place. Ten weeks after the operation, it was found that a cavity still remained, allowing a probe to pass three inches from without inwards, and four and a quarter inches upwards. Free resection of the fourth, fifth, sixth, seventh, and eighth ribs was then performed, three and three-quarter inches being removed from the lowest, and one and three-quarter inches from the highest of these, and from the intermediate ribs gradually increasing lengths. The pleura was not opened in any fresh place. By various methods of calculation, Dr. Bruglocher arrives at the conclusion that the length of rib to be removed must about correspond with the distance between the pulmonary and parietal pleura, and the resection must be carried upwards in gradually decreasing extent to the point where the two surfaces of pleura are again in contact. The results obtained in this case were satisfactory, the falling-in of the chest-wall was ultimately followed by complete healing of the sinus.

E. CLIFFORD BEALE, M.B.

4. *West on Bullet-wound of the Pericardium, Heart, and Stomach.*—In the *Lancet*, July 1882, p. 55, Mr. J. F. West reports a case admitted under his care at the Queen's Hospital, Birmingham. There was a self-inflicted wound three inches below the left nipple, and one inch to its sternal side. This was not accompanied by external hæmorrhage, but the patient vomited blood; he was suffering from slight shock, and died twenty-three hours after the infliction of the injury. In the necropsy, the bullet was seen to have entered through the fifth interspace into the pericardium, lacerating a few fibres of the apex of the heart, thence again through the pericardium and diaphragm into and through the stomach, passing out through the posterior wall, through the diaphragm again, and finally lodging in the body of the tenth dorsal vertebra. The left pleura contained a large quantity of bloody fluid, and the intestines were full of black blood. It is marvellous that this patient should have lived twenty-three hours after such serious injuries. The case is all the more interesting from the comparative rarity of such wounds.

5. *Worthington on Puncture for Intestinal Obstruction.*—Mr. Worthington, in the *Brit. Med. Jour.*, July 1882, p. 167, reports a case of a labourer, aged 28, who had had for some time attacks of constipation and vomiting, but, on coming under treatment, was suffering from acute obstruction. The abdomen was enormously distended. The patient suffered from stercoraceous vomiting, and great pain about the umbilicus; no hernia was discovered. These symptoms gradually became worse for six days, during which opium was given, enemata administered, and fomentations, and, later, ice were applied to the abdomen. Mr. Worthington, as a preliminary to abdominal section, punctured the abdominal walls at a spot two and a half inches above, and one and a half to the left of, the umbilicus, with a medium-sized aspirating needle. A large quantity of flatus gradually escaped, followed by stercoraceous fluid; some gurgling was then noticed in the bowels. A few hours later, the patient passed wind, and two

fluid stools. A week afterwards, it was discovered that he had a small direct inguinal hernia. He made a rapid recovery, and, on a truss being applied, he returned to his usual occupation.

6. *Batten on Belladonna in Hernia.*—In the *Brit. Med. Jour.*, July 1882, p. 87, Mr. Batten records two cases of hernia treated by large doses of belladonna. The first was a man, aged 79, with an old inguinal hernia, who, a week before coming under treatment, while doing some heavy work, felt the hernia suddenly give way. Ordinary means failed to reduce it, and the patient refused either to take chloroform or undergo an operation. He was ordered half-drachm doses of the tincture of belladonna every half hour; in three hours' time there were toxic effects, and the rupture passed up easily. The hernia came down again a fortnight afterwards; but, after taking three half-drachm doses, it was easily returned. The second was a youth, aged 19, suffering from a hernia, which had existed since childhood. Taxis, in a hot bath, and under chloroform, being unsuccessful, forty-minim doses of tincture of belladonna were given every hour; after four doses he fell asleep, and, after two hours more, the hernia was found returned. Mr. Batten concludes some remarks on these two cases with the observation that belladonna contracts the calibre of the congested vessels, and the non-striated muscular walls of the protruded gut, and thus renders reduction into the abdominal cavity more easy.

7. *Thomson on Ligature of the Innominate Artery for Subclavian Aneurism.*—Mr. William Thomson gives in detail his interesting case of ligature of the innominate artery in the *Brit. Med. Jour.*, Oct. 1882, p. 722. The case did well until the forty-second day, when death ensued. The result of the operation would lead Mr. Thomson to perform it again, as the cause of death in this case was accidental, being due to ulceration that appears to have originated in the use of the drainage-tube. A very full and exhaustive history of all known cases of ligature of the innominate concludes this instructive paper.

8. *Bryant on Popliteal Aneurism cured by Dr. Fleet Spiers's Artery-Constrictor.*—Mr. Thomas Bryant, in the *Brit. Med. Jour.*, Oct. 1882, p. 721, relates a case, giving a plate of the instrument, in which Dr. Spiers's hook cured a case of popliteal aneurism. Esmarch's bandage had been first applied for about an hour, but the heart's action was so much disturbed that serious results were anticipated. After all cause for alarm had passed, the hook was applied under strict Listerian precautions, a perfect cure resulting.

9. *Marsh on Bone-Setting.*—There is a paper, by Mr. Howard Marsh, in the *Brit. Med. Jour.* for Oct., p. 663, giving an insight into the proceedings of the class of practitioners commonly called bone-setters, and pointing out that, in nine cases out of ten, it is the surgeon's own fault that his patients fall into their hands. Bone-setters owe their reputation chiefly to cases in which joints, that are themselves healthy, are stiffened and painful from surrounding adhesions, or from the rigidity of muscles that have either been fixed by too long position, or left contracted after reflex irritation has subsided. In this class, the surgeon should not only move the limbs before they are stiff, but should guard against adhesions by passive motions. Every case is treated in exactly the same way; the joint is made to go through all its normal movements; the patient is always told a 'bone is out'. A common remark is that, though surgeons know all about the large bones, they pay

very little attention to the little ones. If we substitute the term 'lesser ailments' for small bones, the assertion rests, perhaps, on some foundation in fact.

10. *Morris on Ranula*.—In the *Med. Times and Gaz.* for Sept., p. 355, Mr. Morris records a case of ranula in a patient aged 40. It was of such large size that the tongue looked as though it were enlarged and tied down to the floor of the buccal cavity in front, being, however, much above the level of the lower teeth; but, on further examination, the tongue appeared to be a mere appendage to a ranula situated beneath it. The ranula began, ten months previously, as a small bladder-like enlargement on one side of the frænum. It was soft but not fluctuating; it showed one small ulcerated spot on the left side. Pain and swelling of the neighbouring glands were absent; but it caused considerable inconvenience from its size. A small quadrilateral piece of the anterior wall was cut away, and the cavity stuffed with long strips of lint, some of which were soaked in the tincture of the perchloride of iron. The contents looked like white of egg, and measured an ounce; they became quite solid on heating. The cavity closed by granulation, and subsequently contracted, the cure being quite uninterrupted.

11. *Harrison on Litholapaxy*.—Mr. Reginald Harrison reports, in the *Brit. Med. Jour.* for Oct., p. 669, a case of litholapaxy, which is worthy of record in that the stone must be amongst the largest of those so treated. It was too large to be grasped with the lithotrite, but, by clipping away at its sides, it was sufficiently reduced in size to be grasped and broken across. This was done with the fenestrated lithotrite; the operation was finished with the smooth-bladed instrument. The patient was under anæsthetics for two hours and ten minutes, during which period thirty washings out of the bladder were employed. The calculus was a compound one of phosphates and urates. The fragments weighed, when dried, exactly two ounces and two drachms; making an allowance for a certain loss of fragments during the numerous washings, the stone could not have weighed less than two ounces and a half. The patient made an uninterrupted and perfect recovery, leaving the infirmary to continue his usual occupation thirty-two days after the operation.

12. *Wilkes' Flexible Probe for Detecting Bullets*.—Mr. Wilkes, in the *Med. Times and Gaz.* for Aug., p. 257, describes a probe which will be very useful for the detection of bullets, or for introducing into burrowing sinuses, when it can be stiffened and cut down upon. It consists of an elastic blind catheter with a porcelain tip and of good length, with a series of stilettes of varying degrees of stiffness. In probing a wound, when the stilette is home, the instrument will go as far as a stiff probe; by withdrawing the stilette a certain distance, the end will be flexible and able to follow the sinuosities which a ball would take. By its power of bending in any way of least resistance, one can pass on the stilette to that point, and try again; and by such a plan the bullet may finally be reached.

R. NEALE, M.D.

13. *Mussey on the Treatment of Chronic Cystitis by the Vesical Curette*.—Dr. W. H. Mussey of Cincinnati (*Columbus Med. Jour.*, Sept. 1882) has devised a curette for scraping the surface of the bladder, where such a manipulation appears to be indicated. The instrument consists of a solid steel sound (No. 20 American scale), with a very long curve, in contrast with the so-called 'Van Buren curve', which is short and abrupt. After suitable dilatation of the urethra, the surface of the bladder may be thoroughly

scraped, and the scrapings removed. The organ is then subjected to careful irrigation by means of a large silver catheter. In several cases of suspected stone, Dr. Mussey states that he has effected a rapid and complete cure by scraping out the bladder, followed by irrigation. As a wash for the bladder, he uses an emulsion of gum benzoin, one ounce in one pint of water, which should be boiled for six hours, and filled to one pint. In some cases, he finds it advantageous to add carbolic acid or boracic acid in varying proportions to this emulsion.

14. *Garrison on Dry Gangrene from Local Application of Carbolic Acid*.—Dr. J. B. Garrison relates the following case in the *Western Med. Rep.* About the middle of February last, a daughter of Dr. Childress consulted her father as to an onychia in process of development on her right index finger. She was directed to apply carbolic acid; but, instead of applying a few drops to the affected part, she wrapped the entire finger, as far as the second joint, with several folds of linen, and poured on it to saturation pure carbolic acid, liquefied, and allowed it to remain all night. Next morning the bandage was removed; and, on the third day after the occurrence, when Dr. Garrison first saw it, the finger, as far as the second joint, was as black as jet, cold, perfectly anæsthetic, wrinkled and shrivelled, with sulci apparently clinging to the bone; it was hard as wood; in a word, actually mummified, with a line of demarcation entirely around the finger, indicating a complete separation of the dead from the living tissue. Although there seemed no possibility of saving the finger, as it had actually lost every vestige of vitality, he directed a small rubber band to be tied round the finger, near the metacarpo-phalangeal articulation, sufficiently tight to obstruct the reflux of venous blood without repressing the arterial supply. This was applied for five or ten minutes every hour, and kept up continuously for more than two months. The tissues of the finger gradually yielded to the mechanical pressure of the blood, and the digit resumed its shape and functions, except that it was entirely denuded of integument. The old skin was allowed to remain as a protective, and warm moist poultices, with oil and glycerine, were constantly applied to soften the tissues. The fortunate result of this case is an additional argument in favour of the principle of conservatism in surgery, which should obtain in all similar cases.

15. *Duncan on the Treatment of Fresh Wounds*.—Mr. John Duncan (*Edin. Med. Jour.*, July) has recently made some experiments with salicylised wool as a simple dressing. The method he has pursued is as follows. The wound is carefully and accurately stitched after every bleeding point is secured; if the wound be large, an interval of an inch or less is left between two of the stitches at some convenient part, and if, from the nature of the wound, firm compression throughout be uncertain, a few of the catgut ligatures are left long and brought out at the interval, or an India-rubber drainage-tube is inserted. In most cases, it is completely closed. A piece of dextrinised oiled silk is applied. Mr. Lister's object in this application is to protect from carbolic irritation; but, were it not that it also prevents adhesion of the dressings, Mr. Duncan does not consider it of importance when the edges of a wound are carefully approximated. One layer of moistened gauze is the next covering, and over it a thick padding of dry salicylic wool, firmly compressed by a gauze bandage. The layer of gauze facilitates the ultimate removal of the dressings. The dressing is allowed to remain

applied, in many cases where no drainage-tube is used, for three weeks; if a tube is inserted, it is either dispensed with the day after the operation, or at the end of the third or fourth day. The following are the results obtained. 1. *With Perfect Healing*: 3 herniotomies; 3 amputations at the ankle; 2 amputations in the forearm; 1 amputation at the wrist; 1 amputation of the upper arm; 3 excisions of the mamma; 1 excision of the elbow. 2. *With almost Perfect Healing*: 1 amputation of the thigh; 1 excision of the knee; 1 amputation of the leg; 1 excision of the mamma. 3. *In which Failure occurred and the Dressing had to be changed*: 1 strangulated hernia; 1 excision of the wrist; 2 amputations of the ankle. The deductions drawn by Mr. Duncan from his observations are these. 1. When we succeed in preventing sepsis at the operation, we can by this method rely on singularly simple and favourable progress, with total absence of fever, with freedom from pain, and with great rapidity of healing. 2. Should sepsis lead to inflammatory action, it is necessary temporarily to abandon the dressing. 3. Even in septic cases, it is often advantageous to continue it throughout if there be no inflammation, or recur to it when it has subsided, because it is a good recipient for discharge, because it tends to diminish the amount of pus, and because it aids in keeping the part at rest. 4. In fresh wounds so situated that they can be compressed equally, the introduction of materials to secure drainage is usually unnecessary; and if they be employed, they should be removed in twenty-four hours. 5. Sepsis is less apt to occur by this method, as change of dressing is avoided.

16. *Ollier and others on Subperiosteal Amputation and Disarticulation*.—At a meeting of the Surgical Society of Paris (*Rev. de Thérap.*, May 15), M. Ollier of Lyons related experiments made by him on the performance of periosteal coat-sleeve operations in amputations. The results were not satisfactory, and, in a great number of cases, he has refrained from performing this operation. M. Poncet said that he had obtained good results only from this operation; he had never seen the production of osteophytes. He had never had anything but a regular bony growth giving a good shape to the stump. M. Desprès was of the same opinion as M. Ollier, and was completely opposed to subperiosteal amputations. He did not believe that it was possible to detach the periosteum with regularity, and to obtain a periosteal sleeve. M. Poncet said that he had lately amputated the arm of a young man, and detached the periosteum of the humerus with the greatest facility. M. Desprès did not deny that in certain subjects the periosteum might be detached: but that was an exception, and a general rule should not be deduced from one or two cases. A periosteal sleeve might be obtained in a patient on whom an amputation was performed for a white swelling, for then the periosteum was thickened; but, in a healthy individual on whom amputation was performed for a wound in the leg, a complete layer could not be obtained. M. Trélat agreed with M. Poncet, and pointed out that M. Desprès, in attempting to support M. Ollier's opinions, really denied his propositions, for the latter said that the subperiosteal method gave rise to necrosis, to osteophytes, and to fungous bony growths, which elongated and hypertrophied the stump; whilst M. Desprès asserted that detachment of the periosteum was impossible. If, therefore, M. Desprès were right, all M. Ollier's reasons would come to nothing. M. Trélat said he was fully

aware that in certain cases it was difficult to obtain a regular periosteal sleeve; but, even in this case, there still remained a covering, irregular, indeed, but supplying round the bone a surface which was admirably adapted to union by first intention. It was, in fact, when the operation was performed with a desire to obtain union by the first intention, that the best conditions for obtaining that result were found in the subperiosteal method. M. Ollier protested that he was not an opponent of subperiosteal amputation, especially in adult patients. Operative difficulties were perfectly non-existent. He cited several cases which showed the advantages of subperiosteal disarticulation. The advantages of this operation were great safety, minimum loss of blood, and very simple after-results. In addition, the retained periosteum frequently reproduced in the stumps a portion of bone, which, later on, was very useful when an artificial apparatus had to be applied.

17. *Rasumowsky on a Case of Foreign Body in the Bladder*.—The following case is recorded in the *Proceedings of the Medical Society of Kazan*, March 1881. Early last spring, a priest consulted Professor Lewschin, at the surgical out-patient department of the Kazan Hospital, asking that a lead-pencil might be removed from his bladder. He had introduced the pencil, twelve days previously, into the urethra. On examination, the presence of the pencil in the bladder could be readily detected, and it was also found that the pointed end of the pencil had perforated the trigone and projected into the rectum. By manipulation, the pencil was readily extracted through the anus; it was over six inches long, and nearly a quarter of an inch in diameter; its surface was covered with phosphates. The most remarkable feature of the case was the turning of the pencil in the bladder, for its blunt end had been introduced into the urethra, yet its point had perforated the rectum. ALBAN DORAN.

18. *Hack on Hereditary Fissure of the Tongue*.—Hack (*Monats. für Prakt. Derm.*, April 1882) relates two series of cases in which several members of the same family suffered from excoriations and fissures of the tongue. There was no history of syphilis. The patches were generally round on the dorsum and oval at the tip and edges, looked red, and the fungiform papillæ were hypertrophied. In one case, the affection dated from early childhood.

19. *Whitman on Sponge-grafting*.—Dr. R. Whitman (*New York Med. Rec.*, Oct. 9, 1882) records four cases of sponge-grafting, and concludes that it is specially valuable in large, deep, circumscribed ulcers, which are often followed by adherent cicatrices which break readily down. The sponges should be thoroughly carbolised, and then soaked in dilute acid until they become quite friable.

ROBERT SAUNDBY, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1. REYNOLDS.—The Treatment of Club-Foot. (*Trans. of Michigan Med. Soc.*, 1881.)

2. GIBNEY.—Diagnosis of Pott's Disease before the Stage of Deformity. (*Boston Med. and Surg. Journ.*; and *New York Med. Record.*)

3. BRADFORD.—Treatment of Contraction following Hip-Joint Disease. (*Boston Med. and Surg. Journ.*, and *New York Med. Record.*)

4. LUCAS.—Hereditary Tendency to the Production of Supernumerary Digits. (*Guy's Hospital Reports.*)

1. *Reynolds on the Treatment of Club-Foot.*—Dr. Reynolds (*Trans. of Michigan Med. Soc.*) urges the treatment of club-foot at birth. His method is as follows. He first surrounds the extremity with batting or wool, and never applies splint over the side of relaxation, because hard unyielding pressure tends much more to enfeeble muscles than an elastic one, such as bandage alone over wool. For the contracted side, he bends a soft splint well in an opposite direction from the contraction, and especially well around the toes; or, if they be bent well over by the splint, the long tendons of the weak side have at once greater leverage, and soon become active in moulding the foot. He dries the splint till hard before applying it, and then bandages not lower down than the metatarsus, for the purpose of allowing some motion to the toes; for alternating contractions and relaxation are almost constant in the tendons of the young child's foot, and those that are weak, being left somewhat free, will soon equal in strength their stronger antagonists under the splint. The dressing should be removed daily at first, to allow bathing and friction, and to avoid injury from pressure.

2. *Gibney on the Diagnosis of Pott's Disease before the Stage of Deformity.*—In a paper presented to the New York State Medical Society (*Boston Med. and Surg. Jour.*, 1882), Dr. Gibney enumerates some pathognomonic points that should be considered in the early diagnosis of spinal caries. In his experience, tenderness on pressure with the hand, or with the hot sponge, is usually found absent in the early stages of the disease; and, indeed, pressure should relieve rather than cause pain. Nor can the presence of yielding or soft spots be relied upon in forming an opinion as to the nature of the lesion, because they may be found in ordinary rickets. The common test of forcible pressure, or a blow on the head or shoulder in the long axis of the body, he holds to be dangerous, especially where the dorsal or the cervical region is diseased. In the general examination of a suspected case, attention should first be devoted to the duration of the symptoms, then to the conduct of the patient during waking hours, and especially to the use he makes of his spine. Inquiry will usually elicit that a slight strain or jar has been followed by a cry of pain, the sufferer seeking relief in some special position that he finds by experience to be effectual. The disturbed sleep of spinal caries is characterised by restless moanings and faint cries on turning, while in hip-joint disease there are sharp cries without waking. In examining the patient, he should be stripped, and, after the spine has been tested as to its mobility, the functions of the hip-joints should be investigated, and the pelvis explored, as well as the ilio-costal spaces, both by palpation and by percussion. When the disease is located in the cervical and cervico-dorsal regions, among the earliest symptoms are found slight torticollis or modified opisthotonus, while the step is apt to be short and cautious; there will also be a compensating backward curve in the dorso-lumbar region, and the head sinks down between the shoulders. The irregularly acting diaphragm will also assist in determining the seat of the disease, as the fourth and fifth nerves are of necessity implicated. The pharynx should then be explored for tumours. When the first or the second vertebra is the seat of the

disease, occipital neuralgia will be present in almost every case. When the disease is confined to the dorsal region, there will be an absence of the head-symptoms, and the pain will be referred to parts on a level or below the vertebra affected. There will be a lordosis rather than a projection of the spine. When the lower dorsal region is affected, tumours may present in the ilio-costal space before any bony deformity manifests itself. When the lumbar region is the seat of the difficulty, the early symptoms will be confined to the limbs; there will be lameness or stiffness, and the symptoms will last a long while; flexion of the thigh, which is at first slight, gradually becomes more pronounced. But attention should now be especially devoted to the hip-joint, which will be found normal in every respect. Presently, a soft tumour appears in the groin or in Scarpa's space. Dr. Gibney holds that a soft tumour in this situation, when preceded by a lameness that has persisted for some weeks, and in the absence of hip-joint disease, constitutional disturbance, injury, or intestinal difficulty, indicates disease of the last dorsal or first lumbar vertebra. Dr. Gibney also calls attention to a point brought out in a report to the Therapeutical Society, by Dr. T. E. Satterthwaite (*New York Med. Rec.*, Aug. 21, 1880), that Pott's disease is frequently associated with caries of other joints. He therefore urges that in all such suspected cases a thorough examination should be made of all the joints, lest an important complication be overlooked. Dr. Gibney bases his paper upon an examination of the records in one hundred and ninety-six examples of Pott's disease that came under his inspection during the year ending December 31, 1881.

3. *Bradford on Treatment of Contraction following Hip-Joint Disease, by means of the Weight and Pulley.*—Extension has been used in many different ways to correct deformities resulting from hip-disease, but never in exactly the manner practised by Dr. E. H. Bradford, who has described his experience in a paper read before the Boston Society for Medical Improvement, January 9, 1882 (*Boston Med. and Surg. Jour.*, Jan. 19). In three cases, where the thigh was flexed about a right angle with the axis of the sacrum, after the application of a ham-splint, traction was exerted by weight and pulley; so that, at the end of one week, in the first case reported, the leg was brought into a line with the axis of the body. In the second, at the end of a fortnight, the extension was exerted in a line with the bed on which the patient lay; and eight weeks later, with the ham-splint still in position, the patient was allowed to walk about the ward, and finally was discharged with his limbs nearly parallel. The third case was that of a child, three years old, delicate, but fairly nourished. At the end of three weeks, the deformity was so far improved, that no tilting of the pelvis occurred when the limb was placed on the bed. In this case, advantage was taken of the direct weight of the leg, which is no small factor, as shown in a case of nineteen years' standing, when the deformity attained an angle of 70 deg., and the patient was compelled to wear a shoe raised five inches from the ground. In this case, a ham-splint was so applied as to immobilise the knee-joint when the leg was extended. As soon as the patient became accustomed to the presence of the splint, she was allowed to walk about at will. In this way, treatment could take effect only while the patient was standing. At the end of six months, two inches were removed from the sole of the shoe, and the patient could rest the whole weight of her body upon the

affected limb. In cases of short standing, when only a slight deformity exists, Dr. Bradford finds slight traction, without regard to the line of deformity, is effective in a very short time. The skin in the groin will at times be considerably stretched, causing nocturnal pain, but no serious complication has ever occurred under his supervision.

4. *Lucas on Hereditary Tendency to the Production of Supernumerary Digits.*—Mr. Clement Lucas records a case in *Guy's Hosp. Rep.*, in which the existence of supernumerary fingers and toes occurred in five generations of one family. The deformities were transmitted through the material great-grandmother, the grandmother, and mother to the man who furnished the history, and whose children were the author's patients. A genealogical table is appended to the report of this case which shows which members of the family were affected, and which were unaffected with the deformities.

E. NOBLE SMITH.

PATHOLOGY.

RECENT PAPERS.

1. GREEN.—The Origin of Cysts of the Kidney. (*New York Med. Record*, November.)

2. ARNOLD.—Hydatid Cyst of the Heart. (*Canadian Jour. of Med. Science*, Oct.)

3. DUGUET.—Pulmonary Embolism as a Cause of Sudden Death in Phthisis. (*L'Union Méd.*, 1882, No. 130.)

4. FRASER and LOGAN.—Lipæmia in Diabetes. (*Edin. Med. Jour.*, Sept. 1882.)

5. RICHET.—Micrococci in Marine Animals. (*Le Progrès Méd.*, No. 45, 1882.)

6. RATHERY.—Trichinosis in Man. (*Le Journ. de Méd.*, Nov. 4, 1882.)

7. SCHULZE.—Pseudo-Hypertrophy of the Muscles. (*Virchow's Archiv*, Band xc.)

8. MANERO.—Tumour of the Heart. (*Gaceta de los Hospitales*.)

1. *Green on the Origin of Cysts of the Kidney.*—At a recent meeting of the New York Pathological Society (*New York Medical Record*, Oct. 1882, p. 470), Dr. Heitzmann stated that Dr. Jeannette B. Green, a pupil in his laboratory, had devoted special attention to chronic nephritis, and believed that he had succeeded in proving how cysts in the kidneys, such as seen with both catarrhal and croupous (parenchymatous) nephritis, are formed. 'Neither of the former views, that cysts arise from tufts or from uriniferous tubules, is satisfactory. Cysts are often found on the surface of the kidneys where there are no tufts, the same as in the pyramidal substance. In cirrhotic kidneys, we not unfrequently meet with capsules containing a shrivelled or compressed tuft and an albuminous liquid, but in no instance has dilatation of the capsule been observed sufficiently marked to allow the diagnosis of a cyst. Neither could we understand how, by simple dilatation, uriniferous tubules could reach the size that we observe in cysts. The way in which cysts are formed is as follows. First, the interstitial as well as the epithelial tissue of the tubules breaks down into inflammatory or medullary corpuscles, and thus an embryonal tissue is produced, sometimes occupying large territories of both the cortical and the pyramidal substance. Next, a transformation of the medullary into myxomatous tissue takes place,

marked by the presence of a light, nearly homogeneous basis substance, which is traversed by nucleated bioplastic strings. In further growth these delicate strings perish, and a cavity is formed filled with an albuminous liquid. Around the cavity delicate fibrous connective tissue is developed, the inner surface of the wall of the cyst being lined with flat epithelia. From all evidence, those medullary corpuscles that have sprung from former epithelia of the uriniferous tubules are the only ones fit for a transformation into, first, a myxomatous tissue, and later, by liquefaction, into cysts. From what we have seen in kidneys, ovaries, and in the skin, we would consider this manner of formation of cysts as the only one which occurs. As to cysts of the liver, experience is too limited for a positive statement; there are good authorities alleging that from bile-ducts, by simple dilatation, cysts may originate.' [This description closely agrees with that given by me, *v. Path. Soc. Trans.*, 1880, 'The Histology of Granular Kidney'.—*Rep.*

2. *Arnold on Hydatid Cyst of the Heart.*—Dr. Arnold reports (*Canadian Journal of Medical Science*, October 1882) the case of a young man, aged 21, who had been subject to fainting. The heart's action was energetic, but the pulsations regular and normal. There were a cyanotic condition of the skin, without true respiratory embarrassment, a general and confluent urticaria, and a manifest tendency to algidity. The necropsy discovered three hydatid cysts at the apex of the left lung; in the pulmonary artery were numerous free hydatids of all sizes, and still more hydatids in the right ventricle. In the right auricle was a cystic tumour, semi-collapsed, with an enlarged slit-like opening toward the tricuspid orifice, and filled with hydatids. The liver and spleen contained no cysts.

3. *Duguet on Pulmonary Embolism as a Cause of Sudden Death in Phthisis.*—M. Duguet (*L'Union Médicale*, No. 130, 1882) reports a case of sudden death during the course of phthisis, in which he found a tough non-adherent clot obstructing the branch of the pulmonary artery supplying the left lower lobe. No source for the embolus could be found in the vena cava or iliac veins, but in the right profunda femoris vein there was a clot about two inches long, which occluded only partially the lumen of the vessel. At its upper end it was irregularly torn. It is notable that there was no œdema of the leg, nor had the patient complained of any pain.

4. *Fraser and Logan on Lipæmia in Diabetes.*—Dr. T. R. Fraser and Dr. J. R. Logan report (*Ed. Med. Jour.*, Sept. 1882) a case of diabetes in a patient aged 35, who was under observation some months, and finally died comatose. The blood was examined shortly before death, and was found to look white and to contain a large quantity of fat. The *post mortem* examination showed fatty blood, with white masses of blood-clot in the coronary arteries, vessels of the omentum, etc. The viscera possessed an acetone-like odour. Under the microscope the vessels of the liver 'were filled with normal blood-elements, along with other unusual constituents, consisting of fat and albumen in the form of granules'. In the lungs 'the capillaries were found in a state of dilatation and intense congestion. In some parts the red cells were seen closely packed, so as to be distorted in their shape, but their colour was well preserved. In other parts of the vessels a translucent substance, generally in the form of minute globules pressed together, and a few granules, were seen.' The urine examined after death had a marked acetone odour,

contained about one-seventh of albumen, but less sugar and urea than at any time during the life of the patient. Albumen had been present during life, but only in traces. There is no reference to the ferric chloride reaction. The white masses in the coronary arteries and mesenteric vessels are called 'embola', but without any obvious reason. The description of the microscopical appearances of the pulmonary vessels is vague, but apparently no microscopic fat embola were found. In their explanation of the death, the authors consider that the fat obstructed the circulation, causing congestion of the lungs and brain; hence the dyspnoea and coma, these effects being also partly due perhaps to the 'defective nutrition,' the 'accumulation of effete matter,' and the 'presence of acetone'.

5. *Richet on Micrococci in Marine Animals.*—M. Richet (Société de Biologie, *Le Prog. Méd.*, No. 45, 1882) has found micrococci in the stomachs of certain marine fish, and says that sea-water is a favourable medium for their development. M. Malassez reminded the society that M. Pouchet long ago found bacteria in the white corpuscles of apparently healthy fish.

6. *Rathery on Trichinosis in Man.*—M. Rathery, at the Société Médus des Hôpitaux (*Le Journal de Méd.*, Nov. 4, 1882), described the case of a man who had numerous subcutaneous nodules of the size of peas, situated exclusively on the supra-diaphragmatic parts of the body. On excising one of these tumours, it turned out to be a trichinosis cyst. The patient had never suffered from any general or local symptoms of trichinosis.

7. *Schultze on Pseudo-Hypertrophy of the Muscles.*—Professor Schultze of Heidelberg (Virchow's *Archiv*, Band xc, Heft 1) criticises Pekelharig's description of the changes met with in the spinal cord of a case of pseudo-hypertrophy of the muscles (*ib.*, Band lxxxix), and declares that his sections of the cord are quite normal, and the particulars mentioned by him are visible in the cords of perfectly healthy people. These were diminished sharpness of contour of the anterior and inner ganglion cells as compared with the central ones, and loss of ganglion cells on the left side as compared with the right, the central canal occluded, and a number of nuclei gathered round it, a vessel which passed from the anterior spinal vein into the cord, enlargement of the vessels of the grey matter, and poorness of the anterior and median parts of the anterior horns in cells, and the absence of cells entirely in one section of the dorsal cord. Schultze maintains that this disease has nothing to do with the spinal cord, but that it is disease of development, and in support of this view he quotes the negative results of the examination of the cord by Nieryon, Charcot, Cohnheim, Brieger, and himself, and to the concomitant aberrations often met with in these cases. Many are idiots; Drummond and Bramwell found congenital anomalies of the cords in their cases, Gowers found a congenital tumour in the spinal canal. Schultze's view is that held by Dr. Gowers.

ROBERT SAUNDBY, M.D.

8. *Manero on a Tumour of the Heart.*—Dr. Manero reports, in the *Gaceta de los Hospitales* of Valencia, an interesting case of malignant tumour springing from the cardiac substance, and protruding as a pulsating swelling through the walls of the chest. The patient was, at the time of his death, aged 51. The first indications of disease appeared four years previously, in the form of constant lacerating pain in the precordial region, without obvious physical signs ;

in about a year a bulging of the precordial region was noticed, with increased pulsation, attributed to dilatation of the ventricle, and this steadily increased, with increasing pain and gradual emaciation. When seen by Dr. Manero, there was a firm pulsating tumour in the precordial region, about the size of a well-developed virgin breast; it was very painful to touch; the skin over it was healthy. On auscultation of the tumour the normal heart-sounds were heard exaggerated, but not otherwise altered. The pain suffered is described as intense; it seems to have been of the character of that of angina pectoris, and was attended by constant formication in the left shoulder and upper extremity. Death occurred after the patient had been under observation some months, during which time the tumour had steadily grown, without at all involving the skin. No diagnosis seems to have been made during life. On *post mortem* examination, underneath the pectoral muscles, which were themselves healthy, the chest wall was found to be bulged forwards. (The exact state of the ribs is not given.) On removing the front of the thorax, the lower and front part of the pericardium was found to be the cause of the thoracic bulging, which is described as forming a hernia through the walls of the chest, an oval opening being caused by erosion of the third, fourth, and fifth costal cartilages, with portions of the corresponding ribs and sternum. Within this hernial sac of the pericardium, the greater portion of the heart was found enormously enlarged, apparently in all its cavities, and presenting on section the appearance of a new growth, with the aspect of a melanotic sarcoma, in consistence for the most part like that of a sebaceous tumour crossed by pigmented bars and lines, and having numerous large and small pigmented deposits. The growth appeared to be highly vascular. The valves, columnæ carneæ, openings, etc., are said to have been hardly distinguishable. It is not stated how much, if any, of the normal heart-structure was left; neither is mention made of any microscopic examination. The latter omission is a very unfortunate one, for such a general invasion of the cardiac substance by sarcoma as that described by Dr. Manero must be extremely rare.

WALTER PYE.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BRIEL, M. O.—A Case of Labour complicated with Presence of Echinococcus in the Uterine Wall, and Douglas' Pouch. (*Vratch*, 1882, No. 10, pp. 150-2.)

2. BRIEL.—Two Cases of Pregnancy with Unruptured Hymen. (*Vratch*.)

3. TEPLIASHIN.—Intractable Vomiting in Pregnancy. (*St. Petersburg Med. Woch.*)

4. JENNINGS.—Intravenous Injection for Severe Hæmorrhage. (*Lancet*, Sept., p. 436.)

1. *Briel on a Case of Labour Complicated with Echinococcus of the Uterus and Douglas's Pouch.*—Dr. M. O. Briel, of Charkoff, reports the following (probably unique) case (*Vratch*, 1882, No. 10). A primipara, aged 22, was brought to Professor Lazarevich's clinic on the fourth day after labour pains had commenced and the membranes ruptured. The examination revealed that the fetal head was immovably impacted between the pubic arch and a firm, tense, diffuse tumour, which occupied the posterior wall of the vaginal portion of the uterus. De-

livery of the foetus, which was dead, could be accomplished only after perforation of the head and cranio-clasum. It became now evident that Douglas's pouch was filled with a round elastic tumour as large as a man's fist, intimately connected with the posterior uterine wall. The first six days after labour passed quite usually; on the seventh day the puerperal discharge ceased, and rigor and rise of temperature (104 Fahr.) with uterine pain, followed. Two hours later, there escaped from the vagina a semi-transparent cyst as large as a child's head, containing fluid which shewed the presence of succinic acid and chloride of sodium, and, under the microscope, numerous hooklets. In short, the cyst proved to be that of an echinococcus, which on its internal surface presented many secondary cysts enclosing scolices. A finger introduced into the cervix detected an aperture at its posterior wall, with firm cartilaginous edge, and penetrated into a cavity behind the womb. This cavity was subdivided by incomplete membranous septa into several compartments, enclosing an offensive ichorous fluid with free cysts, the size of which varied from a pea to a pigeon's or a hen's egg. In the course of the next week, the patient daily discharged several more cysts with shreds of the maternal echinococcus-cyst. Then all the symptoms (pain, discharge, fever, etc.) disappeared, and a few days later the patient left the hospital, being all but well. The course of the phenomena in this case was evidently this: development of the echinococcus within Douglas's pouch; the formation of a common capsule of connective tissue in consequence of reactive inflammation of the peritoneum; adhesion of the cyst with the uterine walls, and atrophy of the latter under pressure from the growing tumour; necrosis of the parts under the prolonged pressure of the impacted foetal head; and eventually perforation of the cyst.

V. IDELSON, M.D.

2. *Briel on Two Cases of Pregnancy with Unruptured Hymen.*—Dr. Briel of Charkoff describes, in the *Vratsch*, the case of a girl, aged 18, from Little Russia, suspected of being pregnant. All the signs of pregnancy were found, and the outline of the foetus could readily be detected on palpation; the heart-sounds were very distinct. The hymen was intact, excepting a very minute orifice; on exploration by the surgeon it was torn in two places. Delivery followed a few hours after this examination. The *Journal of the Charkoff Gynaecological Clinique*, for 1877, contains a report of a similar case, where abortion at the sixth month followed four days after complete incision of the hymen by a surgeon. Dr. Briel states that an unruptured hymen in pregnancy is very often observed among the peasantry of Little Russia, where morality is very low, but the fear of illegitimate offspring, as a result of complete connection, much dreaded.

3. *Teplishashin on Intractable Vomiting in Pregnancy.*—Dr. Teplishashin (*St. Petersburg Med. Wochenschr.*) recently attended a sickly anæmic woman, 25 years old, during her fifth pregnancy. In the third month, constant vomiting occurred, and caused serious exhaustion. Considerable abrasion of the external os was detected on examination; this was healed in a month by the application of solutions of sulphate of copper increased from 10 to 25 per cent. The vomiting, however, did not cease. The entire cervix and the os was then freely smeared with solid sulphate of copper; violent sickness followed for three days, then it ceased, the patient's appetite returned, and she rapidly regained health and strength.

AI BAN DORAN.

4. *Jennings on Intravenous Injection for Severe Hemorrhage.*—In the *Lancet* for September, p. 436, Mr. Egerton Jennings records a case of severe *ante partum* hæmorrhage in a woman who was nearly at term, and was first seen two hours after the commencement of the bleeding. On examination the os was found fairly dilated, the membranes were unruptured, the edge of the placenta could be felt just within the os, and the right shoulder was presenting. Blood was still flowing freely. Mr. Jennings injected subcutaneously a drachm of brandy and two grains of sclerotic acid, corrected the malpresentation by bringing down the left foot, and employed steady kneading of the abdomen. An hour later, the patient appearing moribund, an intravenous injection of chloride of sodium and other salts, two drachms of alcohol, and water to twenty ounces, was administered, which immediately revived her, and this was followed by the injection of another grain of sclerotic acid. The delivery took place half an hour later without any further operative procedures. Mr. Jennings without doubt saved the patient's life, and brought a difficult labour to a satisfactory termination by the saline alcoholic intravenous injection, which is more practical, less alarming in its procedure, and attended with less risk than the injection of blood.

RICHARD NEALE, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. BULKLEY.—The Malignity of Syphilis; with an Analysis of 450 cases of the Disease. (*Trans. of the Med. Soc. of the State of New York*, 1882.)
2. DIDAY.—Druggists' Treatment of Gonorrhœa. (*Lyon Méd.*, No. 18, 1882.)
3. LEWIN.—On Gummata, peculiar as regard Seat, Hardness, and Course. (*Charité Annalen*, vii Jahrg. 1882.)
4. SEMON.—On some rare Manifestations of Syphilis in the Larynx and Trachea. (*Lancet*, April 1, 8, 15; May 13; June 3, 1882.)
5. CARAMITTI.—Cases of Syphilitic Sore on the Face. (*Giorn. Ital. delle Mal. e Ven. della Pelle*, June 1882.)
6. OTIS, F. N.—Acute Syphilis: a Clinical Lecture. (*New York Med. Rec.*, July 8, 1882.)
7. TURNER.—On the Etymology of the word Syphilis. (*Annales de Derm. et de Syph.*, July 1882)
8. WIDERHOFER.—On Syphilis in Children. (*Allgem. Wiener Med. Zeitung.*, No. 29, 1882.)
9. CHEYNE, WATSON.—The Abortive Treatment of Gonorrhœa. (*Lancet*, August 5, 12, 1882.)
10. RYLEY.—The Abortive Treatment of Gonorrhœa. (*Lancet*, Aug. 12, 1882.)
11. MARTINEAU.—The Evolution of Syphilis. (*La France Méd.*, Aug. 19, 1882.)
12. MARTINEAU.—On the Subcutaneous Injection of Ammoniated Mercurialised Peptone in Syphilis. (*L'Union Méd.*, Aug. 19, 1882.)
13. BATTERSBY.—The Variety and Differential Diagnosis of Venereal Sores. (*Lancet*, Sept. 2, 1882.)
14. STREATFEILD.—Syphilitic Inflammation of the Lacrymal Gland. (*Brit. Med. Jour.*, Sept. 30, 1882.)
15. STREATFEILD.—Syphilitic Chancre at the Inner Canthus. (*Ibid.*)
16. ROBINSON, F.—Syphilitic Inoculation by Tattooing. (*Ibid.*)
17. Disguised Syphilis. (*Philad. Med. and Surg. Rep.*, Sept. 30, 1882.)
18. BADER.—The Treatment of Gonorrhœal Ophthalmia. (*Lancet*, Oct. 14, 1882.)

1. *Bulkley on the Malignity of Syphilis*.—Dr. L. D. Bulkley states (*Trans. of the Med. Soc. of the State of New York*, 1882), in a paper which contains a table of 450 cases of syphilis, that he employs the term 'malignity' to express the ultimately harmful, or even destructive, tendencies of syphilis under certain circumstances, and in contradistinction to the term 'benignity', which has been applied to syphilis by others, notably by Dr. C. L. Dana. The author protests against regarding syphilis as a benign disease in any sense of the word; in fact, he considers it hardly second to any but phthisis in its influence on the life, health, and happiness of the human race. Of the cases tabulated, 300 occurred among 1,072 miscellaneous skin-cases in hospital practice, and 150 among about 2,500 cases of skin-disease and syphilis in private practice. Many of the patients suffered severely from affections of the skin and other parts; and the author states that he can also readily call to mind between half a dozen and a dozen cases in private practice where serious deformity of the nose occurred.

2. *Diday on Druggists' Treatment of Gonorrhœa*.—In this paper, M. Diday protests (*Lyon Méd.*, No. 18, 1882) against the treatment of gonorrhœa by druggists, his argument being that they always prescribe specifics (copaiba, cubebs, etc.) and injections much too early, and thus prolong the duration of the attack to more than twice its normal length. M. Diday exemplifies his meaning as follows. *Doctors' Treatment*.—A patient first notices discharge on April 25, and comes to the doctor on May 1. The treatment should be: From May 1 to June 7, diluents, etc.; June 7 to 21, direct antibleorrhagic treatment. Duration about 50 days. *Druggists' Treatment*.—May 1 to 8, diluents; May 8 to June 21, injections and specific drugs internally, with no good results; June 21 to July 20, again diluents; July 21 to August 14, antibleorrhagic remedies in large doses. Duration, 105 days.

3. *Lewin on Gummata, peculiar as regards Seat, Hardness, and Course*.—Professor Lewin of Berlin relates (*Charité Annalen*, vii Jahrg. 1882) three cases in which syphilitic persons had tumours in the palms of the hands, which he considered to be gummata. In the first case, that of a man aged 45, who had previously been under Lewin's care for syphilitic affections of the pharynx and larynx, three swellings appeared several years after contagion, on the right palm, and, at a later period, a swelling on the second phalanx of the thumb. These swellings, as well as another near the internal condyle of the left humerus, were still present when the man was again seen in 1881, ten years after contagion. All of them were diagnosed by the author to be gummata. Subcutaneous injections of mercury, under which the earlier symptoms had subsided, were prescribed; but, after a month, there was little change in the tumours. After an interval, inunction of one drachm of mercurial ointment daily was tried, and this also failed to benefit. After a further interval, iodide of potassium was given in a daily dose of thirty grains, gradually increased to forty-five grains. Under this treatment, the swellings began sensibly to diminish, some to one-half and others to a quarter of their original size. No further particulars are given. In the second case, a man, aged 30, noticed, five years after contagion, two swellings in his right palm; and soon afterwards a tumour near the left olecranon. Later still, another swelling appeared near the last; and, finally, a fifth tumour appeared in the left palm. All these swellings were present when the patient, who

also had been treated by the author for his earlier symptoms, returned to consult him; and there was, in addition, a swelling, of the size of a hen's egg, over the second cervical vertebra. Nothing is said about the treatment or termination of this case. In the third case, that of a man aged 30, nine years after contracting syphilis, two tumours, about the size of a hazel-nut, appeared in the right palm, and one in the left palm. The swellings were almost as hard as cartilage. There was another swelling near the internal condyle of the left humerus. Under iodide of potassium, the swellings became somewhat less hard, but did not diminish in size. The further history was not known. The author, in the latter part of his paper, enters at considerable length into the diagnosis of gummata from other swellings.

8. *Widerhofer on Syphilis in Children*.—In some clinical remarks published in the *Allgem. Wien Med. Zeitung*, No. 29, 1882, Dr. Widerhofer reminds his class that a child may be (1) born with signs of syphilis, or (2) born dead, or (3) may only show signs of disease during the second or third month after birth. Children born with syphilides show only the papular or pustular forms. Those in whom signs do not appear for several weeks, usually have the macular form, and this usually develops during the second month. In most cases, swelling of the nasal mucous membrane is the first sign of inherited syphilis; the child becomes pale and sleeps badly, and then, some days later, the macular syphilide appears. The spots are most numerous on the face, forehead, outer aspects of the extremities, and on the buttocks. Papules often appear among the maculæ. The pustular is the gravest form of syphilide; it is usually present at birth. When it is limited to the palms and soles, it is called syphilitic pemphigus. In the diagnosis of a syphilitic rash, polymorphism is the most valuable sign. The swelling of the nasal mucous membrane is also a sign of great diagnostic value. As regards the sequelæ of syphilis, a syphilitic child, as a rule, become rickety, and hydrocephalus often follows. The child's nutrition, also, is affected generally; hence the tendency to rickets. Paralysis and lesions of the cellular tissue may also occur, and, after the first year, 'scrofulous' affections. The glandular system is but slightly affected during the early months, and changes in the glands do not occur until the child is a year old. Abscess of the thymus is very rare. The author himself has seen only one case; the child in that instance lived thirty-six hours; but, in five other cases within his knowledge, the children were all born dead. The prognosis of inherited syphilis is favourable as regards life when no signs are present at birth; but much depends on proper management of the diet.

11. *Martineau on the Evolution of Syphilis*.—In considering the usual course of syphilis, and the various causes which influence it, or, as the author puts it, which render it 'abnormal', M. Martineau mentions (*La France Méd.*, Aug. 19, 1882) the patient's constitution, hygiene, and climate. The two former of these are the most important; a hot or cold climate, as far as mere temperature is concerned, having little or no influence. M. Martineau concludes that the chief causes of 'abnormal' syphilis are unfavourable hygienic conditions, the existence of previous diathetic disease, e.g., scrofula or tuberculosis, and cachexia produced by malaria or alcoholism.

12. *Martineau on the Subcutaneous Injection of Ammoniated Mercurialised Peptone in Syphilis*.—In a recent communication to the Société Médicale des

Hôpitaux (*L'Union Méd.*, No. 113, 1882), M. Martineau, Physician to Lourcine Hospital, relates the conclusions at which he has arrived after fourteen months' experience of the treatment of syphilis by subcutaneous injection of Delpech's neutral solution of mercurialised peptone. The number of patients thus treated was about 600, on whom 11,000 injections were carried out. From this extensive series of cases, M. Martineau has found (see LONDON MEDICAL RECORD, Feb. 1882, p. 47), that, provided the solution be absolutely neutral, that the needle be fine and very sharp, and that the injection be made in the dorsal region, there is (1) no acute pain, (2) no phlegmon, abscess, or eschar (even in a case of diabetes no local trouble occurred). (3.) Mercurial stomatitis hardly ever occurs, unless the buccal surface be previously unhealthy. (4) Gastro-intestinal derangement is never produced. (5) The hypodermic injection of mercury is more efficient, more energetic, and more rapid in its action than any other method of administration. With especial reference to these last points, M. Martineau made the following experiments upon about 100 patients in the same hospital, and as far as possible under the same hygienic and other conditions. One-third of these hundred patients were treated by the subcutaneous injection of 5 milligrammes (about one-twelfth of a grain) of corrosive sublimate; one-third by an internal dose of mercurialised peptone, representing the same quantity of sublimate; and the remainder of the number by inunction of 5 grammes (about 75 grains) of mercurial ointment. The results were as follows. In the women treated by subcutaneous injection, the number of the red blood-corpuscles, which, before treatment, had been from two to two and a half millions, increased in eight days to from four to five and a half millions (the healthy standard). The body-weight also increased in the same time from two to eleven pounds, and the chlorides and urea in the urine were also increased. In the patients to whom the mercury was given by the stomach, from twelve to nineteen days elapsed before the number of red blood-cells increased beyond two millions. The weight also increased more slowly than in the former class. In the patients treated by inunction, increase in the number of blood-cells was manifest in a period which varied between eight and fourteen days; but the standard reached was never so high as in those treated by injection. The body-weight also increased more slowly. Thus, the author concludes that the action of mercury, when injected subcutaneously, is not only more rapid, but also more complete than when introduced by the stomach or by inunction. In syphilitic diseases of the eye, M. Galezowski recommends the injection of cyanide of mercury, in preference to mercurialised peptone. In M. Martineau's experience, however, both iritis and irido-choroiditis rapidly recover under the latter.

14. *Streatfeild on Syphilitic Inflammation of the Lacrymal Gland.*—Mr. Streatfeild reports (*Brit. Med. Jour.*, Sept. 30, 1882) the following case. A man, aged 25, came to the Moorfields hospital because of inability to open his left eye properly. At the outer and upper part of the left orbit, in the situation of the lacrymal gland, a firm, flat, but somewhat nodular swelling could be felt through the drooping lid. The eye itself and the bones of the orbit were unaffected. At the inner canthus of the right eye, but unconnected with the sac or canaliculi, was a red brawny swelling as large as a pea. The patient had also a papulo-scaly syphilide on his forehead, but

denied having had any venereal sore. The man's own account was that the trouble in the left eye began five or six weeks before he came to the hospital, and that the swelling in the corner of the right eye appeared two weeks later. Mr. Streatfeild diagnosed syphilitic enlargement of the left lacrymal gland; the swelling at the canthus of the right eye he considered to be a mucous tubercle. Neither lesion ever caused any discharge or pain, and both disappeared under mercury.

17. *On Disguised Syphilis.*—In an editorial article on this subject in the *Med. and Surg. Rep.*, Sept. 30, 1882, the importance of remembering that syphilis is not of necessity a venereal disease is insisted on; and in illustration, a case is related of a lady who, when two months pregnant, received into her family a young female relation who had been brought up in Germany. This relation was suffering from an eruption on the scalp, which was dressed by the lady, who subsequently noticed that a pin-scratch on her finger became inflamed and angry-looking, and in a short time a nut-like swelling appeared on the inner aspect of the elbow. Afterwards she began to lose flesh; her appetite failed, the throat became sore, she suffered from headache and debility, and albumen appeared in the urine. The patient quickly recovered under biniodide of mercury and iodide of potassium.

18. *Bader on the Treatment of Gonorrhœal Ophthalmia.*—Mr. Bader (*Lancet*, Oct. 14, 1882) reports three cases which further illustrate the success of a mode of treatment advocated by him in 1880. (See LONDON MEDICAL RECORD, Feb. 1881.) The method consists in the application of an ointment composed of 1 grain of red oxide of mercury, one-fifth of a grain of daturin or atropin, and one ounce of vaseline. About two drachms of this ointment are injected beneath the upper eyelid twice a day by means of a glass syringe made for the purpose by Krohne and Sesemann. The ointment escapes, generally with some pus, at the inner canthus. No pain is caused if gentleness be used. Both eyes are to be kept bound up with lint smeared with the ointment. All the cases were severe ones, and the result in all was most favourable. In the first, the cornea was smooth, and only a small nebula of opacity remained; in the second, corneal opacity was barely noticeable; in the third, a case of double ophthalmia, the eyes recovered perfectly, both corneæ being quite clear.

ARTHUR COOPER.

PSYCHIATRY.

RECENT PAPERS.

1. ROUSSEAU.—The Effects of Hæmorrhage in the Paracentral Lobe. (*L'Encéphale*, Dec. 1881.)
2. BAILLARGER, J.—Note on an Alteration of the Brain, characterised by Separation of the Grey Matter from the White Substance of the Convolutions. (*Annales Médico-Psycholog.*, Jan. 1882.)
3. FOVILLE, ACH.—Note on Megalomania, or Partial Lypemania, with Predominance of Grandiose Delirium. (*Ibid.*)
4. DOUTREBENTE.—'Folie à Double Forme,' Multiple Attacks at unequal and sometimes very long Intervals. (*Ibid.*, March 1882.)
5. TAGUET.—Intermittent Delirium. (*Ibid.*)
6. ROUSSEAU.—Intermittent Fever of Emotional Origin. (*Ibid.*)
7. PARANT.—On the Pathogeny of Hallucinations, à propos of a Case of Voluntary Hallucinations in an Insane Patient. (*Ann. Méd. Psychol.*, May 1882.)

8. CULLERRE.—Paralytic Dementia in its Relations to Arterial Atheroma and Yellow Softening. (*Ibid.*)

9. RITTL.—Local Asphyxia of the Extremities in the Period of Depression of 'Folie à Double Forme.' (*Ibid.*, July 1882.)

10. REV.—Contribution to the Pathological Anatomy of General Paralysis. (*Ibid.*)

11. DUTERQUE.—The Ophthalmoscopic Appearances in General Paralysis. (*Ibid.*, Sept. 1882.)

12. BRUNET.—Treatment and Curability of Pericerebritis. (*Ibid.*, Nov. 1882.)

13. ROUSSEAU.—The Relation of Aphasia to Insanity. (*Ibid.*)

14. CLAUUS.—The Etiological and Therapeutic Relations between Diseases of Women and Insanity. (*Der Irrenfreund*, 1882, No. 6.)

1. *Rousseau on the Effect of Hæmorrhage in the Paracentral Lobe.*—A case is related (*L'Encéphale*, Dec. 1881) of which the following is a summary. First attack of cerebral softening, right hemiplegia, dementia. Second attack, left hemiplegia with right ptosis; paracentral hæmorrhage, hypochondria, hallucinations, lypemaniacal delirium. At the necropsy, areas of softening were found in each hemisphere to account for the hemiplegic attacks; there existed also in the centre of the left paracentral lobe a comparatively recent hæmorrhage, of the size of a small hazel-nut, and to this the author ascribes a marked change in the patient's mental condition, which took place shortly before the patient's death. The dement, who previously manifested complete torpor; he became anxious, thought much about his health, considered it so bad as to desire his death, and indifference, appeared to awake from his intellectual at times expressed his wishes and desires. The consecutive delirium was characterised by definite form and continuity, not resembling in any way that resulting from anæmia or congestion (*phlogose*) of the cerebrum; it was of such a kind that if the patient had survived longer he would have presented an example of delusional insanity (*folie*) superseding primary dementia. [From the notes of the case which were taken from day to day, it would appear that this change in mental condition developed itself very gradually; this somewhat militates against the view that it was the result of a definite hæmorrhagic lesion.—*Rep.*] In support of his view, Rousseau mentions Luys' observations of hyperæmia and hypertrophy of the paracentral lobe in the subjects of hallucinations and chronic hypochondriasis. Luys considers the anatomical lesion to be the substratum of the mental pathological condition. Rousseau considers that the hæmorrhage in his case was only moderately destructive, but above all irritative in its action upon the cerebral tissues.

2. *Baillarger on Separation of the Grey and White Matter of the Convolutions.*—The author cites (*Ann. Méd.-Psychol.*, Jan. 1882) four cases of general paralysis of the insane, in which this lesion was observed. It usually occurs in places where the pia mater is adherent to the cortex, and is associated with softening and atrophy of the grey matter; the underlying white substance is generally firm or indurated, but also atrophied. The way in which this lesion becomes manifest on examining the brain is as follows. When the adherent membranes are torn from the surface of the convolutions, they bring with them the whole of the grey cortical layers, not only that covering the gyri, but also that contained in the sulci. Viewed from their under surface, the inverted convolutions are glistening and of a bluish white tint. When this condition is in an earlier stage of

development, it may escape notice. The raising of the membranes fails to make it evident; but it may be discovered by direct examination or by directing a stream of water upon the line of demarcation between the grey and white matter. The author believes that the change which leads to this condition takes place chiefly in the deepest layer of the cortex, viz., the seventh layer, described by Foville senior, and Gratiolet. This layer, being white, and semi-transparent from its tenuity, will account for the whitish-grey colour of the under surface of the separated convolutions. Most, if not all, of the patients in which this condition has been observed, presented a predominance of paralysis on the side opposite to that on which the lesion was noted. The change appears to be most common on the posterior lobes of the cerebrum. Baillarger published a single example of this decortication in 1855. Two cases are recorded in M. Calmeil's book on inflammatory diseases of the brain, in which it is evident that the condition now described was present.

3. *Foville on Megalomania.*—In this paper (*Ann. Méd.-Psychol.*, Jan. 1882) Dr. Foville enunciates and illustrates the view, first published by him twelve years ago, that megalomania, once known as monomania of pride, is in truth the latest stage of development of partial lypomania with predominance of delusions of persecution. It is found, upon talking with most chronic lunatics with fixed grandiose delusions as to their wealth, rank, and power, that they are not happy in their imaginary greatness, but believe themselves to be persecuted on account of it. Further inquiry shows that the large delusions are a secondary development and have come about in the following manner. A patient is primarily affected by hallucinations of hearing and false perceptions of a painful nature; he believes himself to be the object of an organised persecution; in searching about for a reason for this, he eventually hits upon the idea that he is really some great personage, who has been surreptitiously changed at birth, and that others have an object in persecuting him and keeping him shut up lest his just claims should be recognised. The frequency of this sequence of symptoms was brought by Dr. Foville before the International Medical Congress in 1881, and is now generally admitted by alienists. It is an interesting fact, that a large proportion of patients affected by this form of insanity are illegitimate children.

6. *Rousseau on Intermittent Fever of Emotional Origin.*—Dr. Rousseau, of the Auxerre Asylum, relates three cases in the *Ann. Méd.-Psychol.* for March 1882. The first was originally observed by him in 1864, and was published in a memoir on intermittent insanity; it occurred in the clinique of Dr. Renaudin, who is reported to have said that he had seen several other similar cases. The man affected was a railway servant who received a severe shock through a railway accident for which he was partly responsible. This emotion gave rise to an intermittent fever, which was afterwards replaced by intermittent insanity, with stages of heat and sweating occurring during each period of intermittence. Quinine in large doses subdued the febrile element of the disease; and the insanity, being freed from the substratum on which it appeared to rest, gradually disappeared. The second case is quoted from the work of Dr. Macario, thus: 'I remember a woman who was attacked by a quartan fever under the influence of a strong emotion. This fever, after having resisted the action of all febrifuges, disappeared under the influence of an emotion similar to that

which had produced it.' The third case was observed by the author in 1880, and is given with greater detail; in this case, the first febrile attack supervened immediately after great emotional disturbance; the patient had always lived in a locality where intermittent fevers are unknown.

8. *Cullerre on Arterial Atheroma and Yellow Softening in General Paralysis.*—From a study of nine cases which are recorded in his article (*Ann. Méd.-Psychol.*, May 1882), Dr. Cullerre infers that there is a form of paralytic dementia which is characterised by the co-existence of the ordinary lesions of meningo-encephalitis with those of cerebral senility, atheroma, miliary aneurisms, and patches of yellow softening. It is usually developed at an advanced age, follows a somewhat slow course, and may terminate rapidly in a congestive attack, accompanied by acute maniacal excitement. It may be diagnosed during life by the aid of the sphygmograph and by auscultation of the aorta. The mental and bodily symptoms are those at once of senile dementia and of general paralysis. Conversely, some senile dements are subject to congestive attacks, which may lead to inflammation of the cortical layers of the brain, and produce at least the macroscopic lesions of general paralysis. This process of fluxion may, very probably in certain cases, abate to such an extent that the symptoms of general paralysis may entirely disappear, leaving the case to end as one of ordinary organic dementia.

10. *Rey on the Pathological Anatomy of General Paralysis.*—Dr. Rey has found (*Ann. Méd.-Psychol.*, July 1882), in fifteen brains of general paralytics, separation of the cortex from the underlying white matter, as described by M. Baillarger (see No. 2 of this report). Dr. Rey relates six of his observations in detail. It is remarkable that he should have found this lesion existing only in the frontal lobes, whereas the former writer described it as most common on the posterior lobes of the cerebrum.

11. *Duterrque on Ophthalmoscopic Lesions in General Paralysis.*—The appearances in twenty-two cases are described (*Ann. Méd.-Psychol.*, Sept. 1882), and the following conclusions are deduced. The changes seen in the fundus of the eye belong to three distinct periods in one continuous degenerative process. The first period is characterised by inequality of the pupils, papillary congestion, and varicose dilatation of the retinal veins and arteries. The second period is that of papillary and circumpapillary cedema; the disc is always indistinct and often clouded by exudations, of which the thickness is directly proportionate to the length of time during which the disease has existed. The third period is that of atrophy with its characteristic appearances. If to these are added choroidal atrophy, be presence of retinal hæmorrhages, and the production of small or large granulations of high refracting power upon the retina and the choroid, all the ophthalmoscopic changes seen in general paralysis will have been noticed.

12. *Brunet on the Treatment and Cure of Pericerebritis.*—The treatment (*Ann. Méd.-Psychol.*, Nov. 1882) recommended as likely not only to lead to recovery but also to the prevention of relapse, is blood-letting, daily prolonged baths, with cold water to the head, and the administration of tartarated antimony and bromide of potassium in large doses. Two cases thus treated are related in detail; apparent recovery has lasted in one of these cases for two years, and the other suffered no relapse until his death seventeen years afterwards from cirrhosis of

the liver. The author recommends the continuance of antiphlogistic treatment for some time after apparent recovery has taken place; he remarks that alcoholic pericerebritis is more easily recovered from than that which is due to moral causes, the lesions being often less extensive and less intense.

13. *Rousseau on Aphasia in Insanity.*—Mental alienation (*Ann. Méd.-Psychol.*, Nov. 1882) and aphasia very rarely co-exist; the explanation of this varies according to which of the conditions named is primarily developed. The lesion which produces aphasia sometimes leaves the intelligence intact, but more frequently it produces a weakness as distinguished from a perversion of the mental faculties. A sane aphasic patient may be attacked by insanity; but as the number of such persons is extremely small the chances of this occurring are very slight. The insane develop with the lapse of time such a degree of cerebral inertia that destructive cerebral lesions, when not too extensive, most frequently exist without producing corresponding symptoms in the functions of intellect and motility. It is for this reason that they seem to be free from the true aphasia which depends upon a moderate loss of substance, while they fall under the ordinary rules with regard to the other affections of language which are the inevitable consequences of more extensive cerebral destruction.

14. *Claus on Diseases of Women as a Cause of Insanity.*—Nine illustrative cases are related (*Irrenfreund*, No. 6, 1882), and the opinion, expressed that the timely and successful treatment of uterine disease may often prevent an attack of insanity, or cure it, if it have already arisen.

C. S. W. COBBOLD, M.D.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. HEBRA.—Phosphorus Poisoning. (*Boston Med. and Surg. Journ.*, vol. cvii, p. 357.)
2. CASALI.—Ptomaines. (*Annali Univ. di Med. e Chir.*, Fasc. 781, 1882.)
3. MANGINI.—Tests for Alkaloids. (*The Analyst*, 1882, p. 180.)
4. BIEFEL and POLECK.—Charcoal-Fumes: Coal-Gas. (*Zeitschr. für Biol.*, Band xvi, p. 279.)
5. DANILLO.—Phosphorus. (*Jour. de Méd. de Paris*, Sept. 9, 1882.)
6. Lobelia Poisoning. (*Jour. de Méd. de Paris*, Sept. 9, 1882.)
7. DE PONCY and LIVON.—Antimony. (*La France Méd.*, 1882, p. 568.)
8. ZILLNER.—Death from Burning. (*Vierteljahrsschrift für Gerichtl. Med.*, xxxvii, pp. 65, 237.)
9. ERMAN.—Formation of Adipocere. (*Ibid.*, p. 51.)
10. MORACHE and EYSSAUTIER.—Hæmin Crystals. (*Ann. d'Hyg.*, 1881, tome v, p. 17; *Gaz. Méd. de Paris*, 1882, p. 538.)
11. CAZENEUVE, LACASSAGNE, and CHAPUIS.—Expert Procedure in Cases of Suspected Poisoning. (*Lyon. Méd.*, 1882, July 23, Oct. 29, and Nov. 26; *Ann. d'Hyg.*, 1882, tome vii, p. 314.)

1. *Hebra on Poisoning by Phosphorus.*—A highly interesting case of phosphorus poisoning is reported from the practice of Hebra of Vienna (*Boston Med. and Surg. Journ.*, vol. cvii, p. 357). The patient was a shoemaker's apprentice, and of previous good health. For six days before coming under observation, he had noticed isolated red spots on various

parts of his body, soon becoming bluish, and increasing in number. These were easily recognised as hæmorrhages, and affected all parts of the body, including the conjunctiva and other mucous membranes. The gums were slightly swollen. The urine contained blood. The resemblance of the case to one of purpura hæmorrhagica was recognised, but no hypothesis of its causation could be formed. In two days, slight paralysis of the right side of the face was noticed, and a difficulty in pronouncing certain letters; but the mind remained clear, and locomotion and the special senses were unimpaired. The paralytic symptoms rapidly increased; vomiting, complete aphasia, and then coma set in, ending in death next day. The necropsy confirmed the diagnosis of hæmorrhages, including one in the middle of the left optic thalamus, and towards the surface of the left parietal lobe. Capillary hæmorrhages were numerous throughout all the tissues of the body, and in the bronchi, pericardium, myocardium, and all the mucous and serous surfaces, as well as in the muscles of the extremities. A microscopical examination showed the pathological changes met with in phosphorus poisoning. In the apopleptic region of the brain, granules of fat and other evidences of extensive fatty degeneration and infiltration were found; and the same condition existed in other parts of the brain in different degrees. The small cerebral arteries and capillaries exhibited the same changes. Fatty degeneration was found in the most distant parts of the body. Deposits of fat-granules were found in the cells of the liver, and in the epithelium of the urethra. In all the muscles, voluntary and involuntary, deposits of fat-granules were found. Further investigation showed that it is the custom among the shoemakers' apprentices in Vienna to put the heads of matches into the bread and beer of their fellow apprentices; and this patient, who was particularly fond of operating upon his fellows, had no doubt thus fallen a victim to his own folly.

2. *Casali on Ptomaines*.—Casali (*Ann. Univ. di Med. e Chir.*, fasc. 781, 1882; *L'Union Méd.*, 1882, p. 501) asserts that the ptomaines are not comparable to the true alkaloids, but are rather of the nature of amides. The ptomaines are distinguished from the true alkaloids (1) by their mode of formation, (2) by their instability under the influence of heat, oxygen, or sulphuric acid, (3) by their inaptitude to form insoluble chloro-platinates and chloro-aurates. They approach nearer to their amides in constitution (1) by their mode of formation from albuminoids, (2) by their double chemical functions, (3) by their powerful reducing action, especially upon gold salts, (4) by the fact that they give off nitrogen when oxidised, e.g., by nitric acid and by potassium nitrate.

3. *Tests for Alkaloids*.—Dragendorff recommended the employment of potassio-bismuthous iodide as one of the most delicate general reagents for the detection of the alkaloids, as it gives orange-coloured precipitates with most of them. Mangini (*Analyst*, 1882, p. 180) prepares the reagent in a slightly different manner, by mixing 3 parts of potassium iodide with 16 parts of liquid bismuth iodide, and 3 parts of hydrochloric acid. This reagent acts as follows, with the chief vegetable alkaloids. *Strychnia*: a light-yellow precipitate becoming dark-yellow after some time; the supernatant liquid remains clear. *Brucia*: Precipitated at first in filaments which ultimately settle down, of a golden-yellow colour, becoming paler when left at rest for some time. *Morphia*: a reddish-yellow precipitate, which agglu-

merates at the bottom; the liquid remains clear, and the precipitate disappears after a few days if the whole is left at rest, the liquid becoming canary yellow. *Atropin*: Precipitated at first in filaments but gradually settling down in the form of a reddish-yellow powder, which, if left at rest, becomes canary-yellow, and dissolves after some time, colouring the liquid golden-yellow. *Aconitin*: Precipitated at first in flocks, but suddenly forms at the bottom a chrome-yellow pulverulent precipitate, which does not change colour when left at rest, whereas the liquid becomes yellow.

4. *Biefel and Poleck on Charcoal-Fumes: Coal Gas*.—R. Biefel and T. Poleck have re-investigated poisoning by these agents (*Zeitschr. für Biologie*, Band xvi, p. 279). They found that charcoal-fumes contained on an average (eight analyses) carbonic oxide and carbonic acid in the relative proportions of one to twenty. The carbonic oxide was the chief toxic agent. With animals placed in an atmosphere gradually contaminated with charcoal fumes, severe symptoms of poisoning manifested themselves when the oxide reached 0.44 per cent., and death supervened when the gas had risen to 0.62 per cent. With coal-gas the conditions were altered, and 1.5 to 1.94 per cent. of carbonic oxide was reached before the air exercised a fatal effect upon rabbits; the absence of carbonic acid, formed at the expense of the oxygen, appearing to materially modify the toxic influence of carbonic oxide. The effects of carbonic oxide and carbonic acid are thus compared by the authors. Carbonic acid produced varying degrees of coma; dyspnoea, gradually passing into asphyxia; rarely violent tetanic convulsions, and general tremors; gradual paralysis of the lungs. After death the blood was dark red, the lungs were dilated, congested, and cedematous, the brain moderately hyperæmic, and the right heart filled with dark blood. Oxide of carbon, on the other hand, produced no coma, muscular weakness and transitory paresis of the extremities, no dyspnoea, convulsive expiratory movements, and general convulsions. The *post mortem* lesions were: cerebral hyperæmia, and altered red blood in the meninges; alveolar emphysema of the lungs, without cedema; the heart full of liquid blood. The blood contained air bubbles, and there was subcutaneous emphysema.

5. *Danillo on Phosphorus*.—Danillo asserts that toxic doses of phosphorus produce either central or diffused myelitis (*Four. de Méd. de Paris*, Sept. 9, 1882), and that, in acute phosphorus poisoning, hæmorrhages are formed in the central nervous system. Large doses of phosphorus produce central myelitis and extravasations along the whole length of the spinal cord; whilst smaller doses produce diffused myelitis, involving both the white and grey matter. The morbid nervous phenomena observed in phosphorus poisoning may be referred to one or other of these forms of myelitis.

6. *Lobelia*.—A fatal case is recorded (*Four. de Méd. de Paris*, Sept. 9, 1882) of poisoning by lobelia, taken in the form of an emetic.

7. *Caillol de Poncy and Livon on Antimony*.—MM. Caillol de Poncy and Livon (*La France Médicale*, 1882, p. 568), in investigating the effects of the continued ingestion of antimony, administered to a cat ten grains of white oxide of antimony in divided doses. It succumbed to a cachexia, commencing with diarrhoea, and terminating in marasmus. The lungs, liver, and mesenteric glands showed similar changes to those produced by arsenic (*Compt. Rend.*, June 9, 1879; May 15, 1882).

8. *Zillner on Death from Burning.*—Zillner (*Viertelj. für Gerichtl. Med.*, Band xxxvii, pp. 65, 237) has published more extended reports of the examination made by him of the corpses of those who perished in the burning of the Ring Theatre in 1881 (see LONDON MEDICAL RECORD, May 15, 1882). All the bodies, even those which exhibited no external marks of injury, were more or less covered with a thick layer of soot. The upper extremities were strongly abducted from the shoulder, the elbows were bent, and the forearms pronated, so that the backs of the hands lay near the face. A fighting attitude was thus simulated in some cases. This was due to shrivelling, and consequent shortening of the muscular fibres, by the action of heat. The large cavities, and more especially that of the abdomen, were often burst, even in bodies not otherwise much injured, and the bowels protruded. In females, the tympanic state of the abdomen frequently simulated a state of pregnancy. The blood exhibited every grade of consistency, from the normal, through the viscid state, up to a completely friable dry mass, in which last condition the blood-pigment was found to be in an insoluble state. Occasionally, the blood formed a dull lustrous mass in the uninjured heart and blood-vessels. Examined spectroscopically, the blood always showed the bands of carbonic-oxide-hæmoglobin, even in the case of bodies which had remained buried beneath rubbish for a month. In all the bodies which were incinerated, the heart was found in diastole, and rigidly distended with clotted blood. This sometimes gave rise to a suspicion of concentric hypertrophy; but the thin walls of the organ at once revealed the nature of the appearance. The bones exhibited every stage of burning, from a simple burning up to complete calcination. The jaw was mostly firmly closed. The muscles, where the skin was unbroken, had a boiled appearance; but, where they were charred, the odour was that of smoked meat. The drying up of the flesh, and its permeation by pyrogenous products, obviously retarded the advent of putrefaction. In the eye, the application of lower grades of temperature manifested itself as a turbidity of the cornea, and complete opacity of the lens, giving the appearance of cataract. The larynx, trachea, and nostrils, were often filled with foreign material from the stomach, perhaps due to the vomiting excited by carbonic oxide. The urinary bladder was often full of urine, even when the abdomen had burst. Occasionally, where the bladder was empty of urine it contained a gelatinous substance with embedded blood-corpuscles. This was found by E. Ludwig to consist of gelatin, probably derived from the connective tissue by the action of heat. Similar gelatinous masses were found in the uterus in some cases; and this organ was found to be very resistant to the action of heat.

9. *Erman on the Formation of Adipocere.*—Erman has investigated the production of adipocere (*Viertelj. für Gerichtl. Med.*, Band xxxvii, p. 51), and arrives at the following singular conclusions. 1. Contrary to the received opinion, the change of albuminous matters, and specially of the muscular tissues, into fat, does not take place during putrefaction in water. 2. The fatty masses, which are met with in the so-called adipoceros bodies, are the residues of the fat present in the body during life, altered by imbibition.

10. *Morache and Eyssautier on Hæmin Crystals.*—MM. Morache and Eyssautier (*Ann. d'Hyg.*, 1881, tome v, p. 17; *Gaz. Méd. de Paris*, 1882, p. 538) modify the ordinary process for the production of

hæmin crystals from blood-stains. The blood-stain is macerated with water in a tube closed at one end, and terminating in a point at the other. By a shake, a little of the liquid is projected into a single drop of a half-per-cent. solution of common salt, previously placed upon a glass slide. Four or five drops of diluted acetic acid (1:4) are added; and the liquid is concentrated by heat. When the whole is reduced to a syrupy consistence, a few drops of glacial acetic acid are added and the liquid is again concentrated, taking care to apply the heat at the edge of the liquid, so as to prevent its extension. When sufficiently evaporated, a cover-glass is placed upon the syrupy liquid, and it is then examined under the microscope, when hæmin crystals may be seen to form during cooling. These are much larger than when prepared in the ordinary manner.

11. *Expert Procedure in Cases of Suspected Poisoning.*—A controversy has been carried on (*Lyon Méd.*, 1882, July 23, Oct. 29, and Nov. 26; and *Ann. d'Hyg.*, 1882, p. 314) as to the best method of treating viscera to be set aside for medico-legal analysis. M. Cazeneuve advises the addition of alcohol, to prevent putrefaction. To this MM. Lacassagne and Chapuis object. They assert that, according to the researches of Gautier and Etard, there is no danger of the formation of toxic ptomaines till after the lapse of six days, when the primary acid decomposition has passed into an alkaline stage, with splitting of the albuminoids; and that the ordinary vegetable alkalis are capable of resisting decomposition for a considerable period. THOS. STEVENSON, M.D.

MEDICAL CHEMISTRY.

RECENT PAPERS.

1. HOFMEISTER.—Peptone in the Blood. (*Zeitschr. für Physiol. Chemie*, Band v.)
2. DEICHMÜLLER and TOLLENS.—Acetone in Diabetic Urine. (*Liebig's Annalen*, No. ccix.)
3. SMITH, W. G.—Protocatechuic Acid in the Urine. (*Dublin Journal of Med. Sciences*, June 1882.)
4. VON JAKSCH.—Acetonuria. (*Zeitschr. für Physiol. Chem.*, Band vi, Heft 6.)
5. SAUNDBY.—Indican in the Urine. (*Med. Times and Gaz.*, Aug. 19.)
6. OZERETZKOVSKY, A. T.—Examination of Urine of Scorbutic Patients. (*Vratch*, 1882, No. 10, pp. 152-5.)

1. *Hofmeister on Peptone in the Blood.*—Hofmeister (*Zeitschr. für Physiol. Chem.*, Band v, p. 127) found that after injecting small quantities (0.3 to 0.6 gramme) of peptone dissolved in 10 to 20 cubic centimètres of water, four-fifths could be detected in the urine. With larger quantities (1.07 to 9.6 grammes), the blood-pressure falls and the secretion of urine ceases, but the peptone disappears from the blood, and a fifth part can be found in the kidney. Such injections give rise to dulness, sleepiness, and feebleness, in the animals experimented on. He thinks the explanation of the different results of peptone, injected into the blood or absorbed from the subcutaneous tissue to the physiological absorption from the intestines, is that the lymphoid cells, which, during digestion, fill the intestinal mucous membrane, take up the peptone, and thus act for the albuminous nutrition of the organism, as the red corpuscles do for respiration.

2. *Deichmüller and Tollens on Acetone in Diabetic Urine.*—A. Deichmüller (*Liebig's Annalen*, No.

ccix, p. 22) failed to obtain alcohol from 40 litres of diabetic urine; in a series of determinations, acetone was present in quantity varying from .093 to .147 per cent. As the ferric chloride reaction points to the presence of a compound allied to ethyl-aceto-acetate, and, as no alcohol was separable from the distillate, he concludes that the compound is not ethyl-aceto-acetate, but free aceto-acetic acid. Tollens (Liebig's *Annalen*, No. ccix, p. 30) confirms this view, adding the fact that, when diabetic urine is shaken with ether, there is only a trace of the ferric chloride reaction with the ether extract; when, however, he added to the urine one tenth of its volume of a one to one and a half per cent. solution of ethyl-aceto-acetate, the latter was readily extracted by ether.

3. *Smith on Protocatechuic Acid in the Urine.*—Dr. Walter G. Smith (*Dublin Four. of Med. Science*, June 1882) has recorded the case of a little girl, apparently in perfect health, who passed urine which darkened on exposure to the atmosphere. On investigation, this appeared to be due to the presence of protocatechuic acid, one of the 'aromatic' series, and the characteristic reaction of which is green with ferric chloride, reddened by addition of an alkali.

4. *Von Jaksch on Acetonuria.*—Von Jaksch has a paper (*Zeitschr. für Physiol. Chemie*, Band vi, Heft 6) on the chemical tests for acetone in the urine. He uses Lieben's method by distilling the urine, and treating the distillate with a solution of iodine in iodide of potassium and caustic soda, when, if acetone be present, iodoform is thrown down. He has been able to detect a small quantity of acetone in normal urine, but in fever urine the quantity is large; in non-febrile affections the quantity is generally small, the exceptions he has observed being some cases of carcinoma, hydrophobia, so-called acetonuria, and certain cases of diabetes mellitus. In some rare cases of diabetes, a large quantity of acetone may be distilled from the urine, which, at the same time, gives the ferric chloride reaction. This ferric chloride reaction is probably due to the presence of acetic acid, which, by distillation, yields acetone; and hence the richness of these urines in acetone. Increased acetonuria and ferric chloride reaction are also found in some cases of measles, scarlatina, pneumonia, etc. Both phenomena stand in some sort of connection, but increased acetonuria and acetic acid in the urine are by no means identical. R. SAUNDBY, M.D.

5. *Saundby on Indican in the Urine.*—Dr. Saundby (*Med. Times and Gaz.*, Aug. 19, 1882) draws attention to two remarkable cases of a brother and sister, in whom the urine is permanently dark-coloured from the presence of indican. The brother has an enormous spleen, and is subject to attacks of paroxysmal hæmoglobinuria. (Further details of the cases are to be found in the *Med. Times and Gaz.*, Feb. 4, 1882.)

6. *Ozeretzovsky on the Urine of Scorbutic Patients.*—Dr. A. T. Ozeretzovsky (*Vratch*, 1882, No. 10), examined the urine in sixteen cases of scurvy, all being uncomplicated and past the febrile stage, and arrived at results which, on the whole, are at variance with those furnished by the author's predecessors (Duchek, Hohlbeck, Garrod, Ralfe, etc.). His results were these. 1. The daily quantity of the urine, which at the stage of full development of the disease oscillates about the healthy standard (1,500 cubic centimetres), invariably rises within the period of convalescence. 2. The specific gravity of the

urine, reaching 1,020 to 1,028 at the height of the disease, sinks to 1,017 to 1,012 at the stage of convalescence. 3. The highest figures for sulphuric and phosphoric acids are observed at the height of the disease, side by side with increased excretion of urea. 4. The amount of chloride of sodium is invariably increased during the stage of convalescence. 5. The proportion of salts of potassium decidedly is not diminished; on the contrary, admitting the accuracy of the figures given by Duchek for healthy urine (according to Duchek, the proportion between potassic and sodic salts in normal urine is 1:12), it is invariably increased. 6. The amount of urea is, without a single exception, considerably increased in the course of scurvy, the highest figures being observed in the severest cases; as invariably it falls during convalescence, in spite of increase in the weight of the patients and in the excretion of chloride of sodium. From these observations, the author concludes that in the system of scorbutic patients there is an increased metamorphosis of albuminous matters; he thinks it very possible that the increase of urea depends upon extensive destruction of the red corpuscles in the scorbutic blood. V. IDELSON, M.D.

REVIEWS.

BALNEOLOGICAL NOTICES.

1. *Guide aux Villes d'Eaux, etc.* Par Dr. MACÉ. Crown 8vo, pp. 896. 1881.
2. *The Baths of Tarasp Schuls.* By Dr. J. PER-NISCH. 18mo, pp. 155. 1881.
3. *Rapport sur les Eaux d'Aix (Savoie).* Par Dr. L. BLANC. 8vo, pp. 46. 1881.
4. *Schlängenbad and its Waters.* By Dr. R. WOLF. 12mo, pp. 48. 1882.
5. *Karlsbad Waters.* By Dr. B. HOFMEISTER. 12mo pp. 20. 1882.
6. *Terme Fornello-Fontano in Ischia.* By Dr. E. FAZIO. 8vo, pp. 54. 1882.
7. *The Baths of Kreuth.* By Dr. MAY. 12mo, pp. 32.
8. *Sea-Bathing and Mineral Waters of Scarborough.* By Dr. ALEXANDER. 8vo, pp. 131. 1882.
9. *Hydro-thérapie à Champel.* By P. GLATZ. 8vo, pp. 52. 1882.
10. *L'Asthme à Mont Dore.* Par D. E. EMOND. 8vo, pp. 24. 1882.
11. *Gout: Treatment at Royat.* By Dr. C. A. PETIT. 8vo, pp. 8. 1882.
12. *Skin-Diseases at Aix-la-Chapelle.* By Dr. SCHUMACHER, jun. 8vo, pp. 12. 1882.
13. *Die Behandlung des Chronischen Gelenk-rheumatismus.* By Dr. B. BRANDIS. 8vo, pp. 39. 1882.

1. We believe Dr. Macé's guide to be the last French general work on mineral waters. It differs from other guides, in the fact that Dr. Macé has only written the general portion of the book and a few notices of baths, while the bulk of the book is made up of accounts furnished of their waters by the medical men of the different stations. This system has its advantages and its disadvantages. On the whole, we think Dr. Macé would have done better, if he had moulded these accounts into one consistent whole—not allowing some of these monographs to exceed due proportion. Dr. Macé's accounts of any but French waters are not very satisfactory; his account

of English ones is very poor, and he informs us that the English watering places are resorted to not in summer but in winter. On the whole, a good deal of information is to be found respecting the present condition of French baths in this compact volume. The notices of sea-bathing places and of winter resorts do not call for any particular observation.

2. Dr. Pernisch gives a handy and useful account of the waters of Tarasp, of which the English have of late years found out the advantages.

3. Dr. Blanc gives an account of the latest improvements in the well-managed baths of Aix-les-Bains, which at this moment enjoy inordinate popularity with the English.

4, 5. The little treatises on Schlangenbad and Carlsbad are written for English visitors, and require no special notice.

6. The treatise of Dr. Fazio gives an account of the re-establishment of the baths at the port of Ischia. Their waters are essentially the same as those of the springs most resorted to at Casa Miniola. The whole island is rich in valuable thermal springs.

7. The popular little work on Kreuth introduces us to that delightful sylvan station in the Bavarian Alps, which, although it has the drawback of being somewhat rainy, lies 3,000 feet above the sea, and has good brine-baths, and a sulphur-spring.

8. Dr. Alexander has produced a new edition of his work on Scarborough. It is full of good advice on sea-bathing, and gives an ample account of the mineral waters.

9. Dr. Glatz of Champel, near Geneva, continues his work on hydro-therapeutics, and now discusses the symptoms and treatment of albuminuria, and of Bright's disease.

10, 11. Asthma is often relieved at Mont Dore, and at Royat, but there is nothing in the *brochures* of Dr. Emond and Dr. Petit to detain us.

12. Dr. Schumacher advocates winter treatment at Aix-la-Chapelle. The skin-affections which he has treated most successfully, are chronic eczema, particularly *e. squamosum*, furunculosis, psoriasis, prurigo, and pruritus cutaneus, also old ulcers of the skin. He even thinks that he benefited two cases of anæsthetic leprosy.

13. Dr. Brandis of Aix-la-Chapelle contributes what the French call a serious research, on chronic rheumatism of the joints, which is well worth study. He considers the advantages of change of climate, of thermal and of surgical treatment, assigning its proper value to each; but what he recommends most highly, is the use of the salicylate of soda, which he has found most efficacious in large doses. He thus sums up. 1. The dislike of the patient to the medicine must be overcome. 2. Its unpleasant after-effects diminish, as the patient becomes accustomed to it. 3. The medicine does no harm, even if its use be continued for years. 4. The remedy loses its efficacy with time, and its employment should therefore be occasionally intermitted. Dr. Brandis could never satisfy himself that either citric acid or lithium was of any use; but he found some advantage from cod-liver oil, especially among the poorer classes. Dr. Brandis gives useful advice respecting the internal and external use of the waters of Aix and of Burscheid. J. MACPHERSON, M.D.

Pestilentia in Nummis. Geschichte der Grossen Volkskrankheiten in Numismatischen Documenten. Ein Beitrag zur Geschichte der Medicin und der Cultur. Von Dr. L. Pfeiffer und C. Ruland. Tübingen. 1882.

Pestilentia in Nummis: History of Great Epidemic Diseases in Numismatic Documents. By Dr. L. Pfeiffer and C. Ruland. Tübingen. 1882.

THIS work is an excellent contribution to the history of the great disasters which have befallen the European race. It deals with the medals commemorating events which have happened chiefly during the past three or four centuries. The material is arranged throughout in chronological order, and is presented to the reader in an agreeable form. The amount of useful and interesting information embodied in this volume is very great, and does the authors much credit. Numismatics is an enticing study to many, and a taste for such matters is one which grows with very little feeding. This may be partly due to the fact that the artistic is artfully interwoven with the historic, and each of these lends support to many other interesting inquiries, without in the least cloying the appetite with loathed satiety. In the prelude a concise account of the differentiation and dates of recognition of the various acute specific diseases is incorporated. Small-pox was accurately described by individual physicians in the eleventh and twelfth centuries, and has been only generally known since the sixteenth. Scarlet fever and measles were separated from small-pox in the sixteenth century, and from one another in 1627; but it was not till 1790 that Swedish official statistics heeded this information. Corresponding historical facts for the plague, black death, English sweat, typhus, typhoid, malaria, yellow fever, and cholera are given.

The first department of the book treats of the medals and coins which have been struck to preserve the memory of such events as famines, floods, comets, swarms of locusts, and years of plenty and rich harvest. We cannot do better than give a description of the kind of thing herein contained, and we select one of which the work gives a photograph. Commemorating the comet of 1618 a silver medal exists, with a diameter of a little more than an inch, on the obverse of which a coffin on a litter is represented (mantled in a pall figured with a cross), on which the helmet and breast-plate of a knight are resting, and by the side of which an open Bible leans. On the observer's left is a bare tree, and over this a large comet; the legend: 'A drawing of a comet'; the exergue: 'It is as a token'; on the reverse is 'God gives us the comet-star to teach us to better our lives', with the date 1618. Many of these jettons have very curious devices; the Corn-Jew medals are of this sort. On the obverse of two of these a man is figured, walking either to the left or right, carrying a sack of corn over the shoulder, from which the devil, perched on the sack, contrives to make the contents leak. The legend: 'Thou Corn-Jew'; exergue: 'Dear Times, 1694.' There are three medals illustrating hunger and cold in Holland, 1698; later, one recording a good harvest in Saxony, 1720; and yet again, another commemorating a plague of locusts in 1748. Altogether there is a word-picture of 219 medals in this portion, as well as nearly the same number in the second division of the work, which deals with the plague and pestilential diseases, and their prevention. It is not practicable to go

into these, and we must content ourselves with a bare outline. After a few specimens of Roman tokens, a good deal of space is spent on the Wittenberg plague-medals of the sixteenth century, which are divided into five types, according to the ornamentation and writing. Some have the legend running in a single circle, whilst in others this is arranged in two concentric rings, and so forth. A series of medals struck in Italy, Germany, and the Netherlands commemorates the scourges of the Thirty Years' war. The third portion of the book tells of the medals on inoculation and vaccination, and the coins struck in various countries with the object of promoting this latter practice. Under yellow fever two medals engraved in Barcelona in 1821 and 1870, are described. Cholera occupies the fifth section and seventeen pages with thirty-six medals and jettons. Much valuable statistical information is to be found here interposed between the numismatic portions, which are classified in accordance with the various European invasions of 1827-37, 1847-60, and so on. The last chapter deals with those diseases which are always in our midst, and which serve largely to swell the death-list (consumption, cancer, apoplexy, acute pulmonary inflammation). The excessive death-rate amongst children at all ages is a field in which Dr. Pfeiffer has laboured much, and this subject, together with the measures which have been advocated, tending to stem the ebb of deaths, concludes the volume, to which, however, a supplement with corrections, is added. Many facts relating to the origin and progress of founding hospitals in the various Kingdoms are given in the last chapter. An index to the names of persons and places used in the descriptive portion of the book is all that can be desired; and the same can honestly be said of the thirty-six photographs, which greatly add to the value of this contribution to medicine and culture.

ANGEL MONEY, M.D.

Legal Medicine: Part 1. By C. M. TIDY, M.B.
London: Smith, Elder, and Co. 1882.

THIS is the first part, or volume, of a *magnum opus*, projected by the well-known lecturer on chemistry and forensic medicine at the London Hospital. It is not intended to be a reprint of the *Handbook of Forensic Medicine and Toxicology*, which appeared a few years ago, from the joint pens of the late Dr. Woodman and Dr. Tidy; but is an attempt at a complete treatise on legal medicine, in which should be collated from foreign and English literature all recorded cases having reference to the various subjects under consideration.

In a modified form, Casper's method of printing the cases at the end of the chapter, to which they are related, instead of in the text, has been adopted; and each case has been numbered. It is to be regretted that the cases are not numbered in one series throughout the volume. If this had been done, the reader would have been saved the annoyance of finding, for example, 'case 2', at the end of each chapter, and the consequent confusion which is apt to arise. We find that the whole number of cases recorded is 537; and the records of these must render the work an invaluable book of reference for the medical expert and the lawyer.

The subjects dealt with in this 'Part I'—itself a thick octavo—are, evidence, the signs of death, identity, the causes of death, autopsies, sex, monstrosities, hermaphroditism, expectation of life, presumption of death and survivorship, the effects of

heat, cold, lightning and explosives, and starvation. These subjects, we are informed, constituted the basis of the author's course of forensic medicine at the London Hospital during the summer of 1881.

The first lecture, dealing with evidence, is in substance the lecture, as delivered, introductory to the author's course of forensic medicine. It is written in a lively and attractive style, and forms the most readable part of the book. The remaining eleven chapters are more unequal, and often, in great measure, useful notes for the guidance of the expert, but too voluminous to be generally serviceable to the ordinary practitioner, except for occasional reference.

Since the Part I, under review, covers only a limited portion of the field of forensic medicine, it is manifest that the work, in its completed form, will be one of great magnitude: indeed, it aims at being a more extended and complete treatise on the subject than any hitherto published in this or, perhaps, any other country.

The writer of this notice has carefully looked into the whole volume, and can accord high praise to his official colleague at the Home Office for the satisfactory manner in which he has done his work; and must express his admiration at Dr. Tidy's indefatigable industry in the collection of such a large number of illustrative cases. It would be impossible, in a short notice, to criticise the book in detail; but attention may be drawn to a few debatable points, and to some which are treated of with doubtful propriety.

On p. 29, the author says, 'after somatic death, *it is certain* that a considerable degree of molecular life may manifest itself, such as epidermic fecundity (evidenced by the growth of hair and nails), and occasionally *acts of nutrition and secretion*.' The italics are our own. Medical jurists are by no means certain of these so-called facts; and we believe that some of the cases, quoted by Dr. Tidy in support of this statement, are inadequate to bear out so strong an assertion. The apparent growth of the beard and nails, after death, is very deceptive; and the evidence of acts of nutrition under such circumstances is, we believe, quite inadequate to prove the statement made.

In the excellent description of the application of the spectroscope to blood-stains, no reference is made to the necessity of comparing the spectra from a stain, side by side, with those obtained from normal blood, nor of reducing drawings of the spectra obtained to a scale of wave-lengths. The omission of one or other of these precautions may prove a fertile source of error. The particular form of microspectroscope advised is also, we believe, by no means the best. Evidently the chromo-lithograph of blood-spectra, which forms the frontispiece of the volume, is not drawn to a scale of wave-lengths, and thus loses nearly all its value to the accurate observer.

Nearly the whole of the eleventh chapter, devoted to combustibles and explosives, might, with advantage, have been omitted. Valuable as it is to the scientific expert, it forms no part of the business of the medical jurist to determine at what temperature iron pyrites may spontaneously ignite; neither is he called upon to consider the conditions under which coal-dust may prove an explosive substance; nor, again, is he called upon to consider the provisions and regulations of the Acts relating to the storage of explosives. Considering the vast mass of matter to be dealt with in this and the succeeding volumes,

anything which unnecessarily increases the bulk of the work is to be deprecated.

Dr. Tidy's handsome volume cannot fail to be acceptable to those members of the profession who act as medical experts, and, as a necessary work of reference, to be placed in every medical library.

THOS. STEVENSON, M.D.

Human Morphology: A Treatise on Practical and Applied Anatomy. By HENRY ALBERT REEVES, F.R.C.S. Ed.; Assistant-Surgeon and Teacher of Practical Surgery at the London Hospital, etc. London: Smith, Elder, and Co. 1882.

THE first volume of this work, which has recently appeared, is devoted to the anatomical study of the limbs and perinæum. In the seven hundred pages thus employed, there is much that is excellent, and much that is the reverse. Students will find it a help to their anatomical studies, and surgeons a useful book of reference. The author has solved the difficult problem how to avoid long descriptions without sacrificing necessary detail to brevity.

The volume just published contains much useful information, given with clearness and precision. Five hundred and sixty-four illustrations are distributed among the text, and contribute to lighten the labour of the student of anatomy. Some of these illustrations are original; many are borrowed from French and German treatises on anatomy. A number of admirable diagrams demonstrate the relative position of the different organs.

Mr. Reeves has adopted the excellent method of briefly surveying a region before describing it in detail. He also acts the part of a good friend to the student, by giving directions how to commence his dissection, and indicating the precautions necessary to take.

The description of each organ is headed by a short paragraph, indicating the principal features and anatomical disposition with which surgeons have to be familiar. These paragraphs will be appreciated by the student, and must inevitably aid him in his surgical studies. At the end of every chapter is a clear and concise summary of its contents. This excellent innovation will save those who only require to refresh their memory much time and useless labour.

Mr. Reeves has done well in omitting histology, inasmuch as it is a branch of anatomy of sufficient importance to require special study, and also one which progresses so rapidly that the few chapters which are devoted to it, in a treatise of practical anatomy, soon cease to be up to the standard of actual knowledge.

Descriptions of rare dissections are conspicuous by their absence. This is another commendable omission; for, as Mr. Reeves sagaciously observes, such information is not of general utility. The class for whom his book is written, medical students, neither require nor seek it.

In the first chapters of this treatise, the author rapidly sketches the rise and progress of anatomy and histology, and furnishes, in detail, data for preparing and preserving subjects for dissection. The principal instruments and methods used for dissecting, and for making injections, are also described.

Mr. Reeves has shown less judgment in the order he follows in describing the different parts of the body. In important treatises, such as the one in question, the bones are generally studied first; then follow the ligaments, muscles, and vessels, etc.

This method, which may be termed conventional, we prefer to that chosen by Mr. Reeves. His method is one frequently adopted by authors of dissecting manuals, and suitable for works which are only consulted in the dissecting theatre; but it has led Mr. Reeves to commit the fault of occasionally being far from clear, and of rendering it difficult for the reader to arrive at a clear consecutive idea of an organ, such as a nerve or an artery, of any length.

The original illustrations in Mr. Reeves' treatise are too roughly done to be satisfactory, and contrast painfully with those borrowed from the works of Henle, Hirschfeld, Cruveilhier, Sappey, Hoffmann, and others. The illustrations of a treatise on anatomy need not necessarily be finished works of art; but plates clearly and sharply executed where the different organs are accurately defined, greatly aid the memory and comprehension of the student. Several plates, descriptive of the principal sections of limbs and vascular anomalies, appropriately bring the volume to a termination.

W. VIGNAL.

L'Hypermégalie et la Paralysie de la Luette, et leur Influence sur la Voix. Par CHARLES LABUS, Professeur de Laryngoscopie à l'Université de Pavie, Chef du Service pour les Maladies de la Gorge à l'Hôpital Majeur de Milan, etc.

THIS little essay on the affections of the uvula will doubtlessly be found worthy of perusal by those who have not made a special study of diseases of the throat, directing attention as it does to an often overlooked cause of a serious alteration in the vocal powers. An artist complains that his voice is changed in tone and power; that he is obliged to prepare by special contractions of the throat for certain effects, so that he has to give his attention to the production of sound at the expense of sentiment and expression; that he is obliged to make grimaces, and avoid singing on certain vowels. He also complains that his voice is thick, or has a guttural vibration, or a nasal sound. While his high and low notes may be still good, his middle ones have lost their sonority; or the high notes may be produced with difficulty or be altogether wanting. He can still sing fairly well, but gets tired immediately, and has a sensation of constriction, a pressure in the throat that prevents him from proceeding. We examine the mouth, the tonsils, the palate, the uvula; all appear natural. The larynx is next inspected; as far as can be seen by the mirror, no disease is present. For want of a better, we make a diagnosis of a weakness of the organs, of atony of the adductor or tensor muscles of the vocal cords, and the more readily as we find that some such cause as abuse of the voice, irregularity of living, or, in females, some menstrual disturbance, is present to account for it. We prescribe stimulating applications to the larynx, revulsives to the neck, hydropathy, electricity, general tonic treatment, rest of the voice, etc. But, after some weeks of treatment on these lines without effect, our *amour propre* is wounded by finding that on the advice of say a professional friend, or a practitioner who has not even examined the larynx, the troublesome affection has been cured in a few days by cauterisation or excision of the uvula. In such a case, says our author, empiricism triumphs over science. It must be owned that, since the discovery of the laryngoscope, there is a tendency to refer all vocal troubles to those parts which laryngoscopic investigation has opened up, and not to take sufficient account of more obvious parts,

which do not, however, play a lesser rôle in phonation. The influence the uvula exerts upon the resonance of the pharyngeal cavity, thus modifying the *timbre* and power of the voice, is very considerable, as may be seen by the various alterations in form and position it undergoes when the ascending scale is sung. Under the generic name of 'Hypermégalie Uvulaire', Dr. Labus discusses the various affections that lead to an increase in size of the uvula. In paralytic cases it may be normal in volume, form, and colour, and it is these cases which are deceptive; for ordinarily the throat-mirror is kept in front of the uvula while asking the patient to pronounce the vowels *a* and *e*, etc., and thus prevents us from noticing that it is not making the proper contractions, but incomplete or intermittent ones, or is remaining completely pendant, or oscillating tremblingly. The caution to make the patient phonate while inspecting the mouth before introducing the mirror is an useful one. Its adoption as a matter of routine should obviate in most cases the overlooking of a paralytic affection of the uvula. We quite agree with Dr. Labus that excision of the uvula does not impair the quality of the voice; but rather that it improves its clearness and purity, and its facility in producing high notes.

W. J. WALSHAM.

Leprosy in British Guiana: An Account of West Indian Leprosy. By JOHN D. HILLIS, F.R.C.S., M.R.I.A. London: J. and A. Churchill. 1881.

MR. HILLIS has written a book on leprosy, in which the symptoms and history of the disease are ably described, and has illustrated it by a number of well-executed plates, in which the changes produced by the malady in the appearance of the skin are very accurately portrayed. Two plates are devoted to the microscopic appearances observed in stained sections.

The work is evidently the result of much labour, and the author has not only been successful in giving an accurate description of the various forms of leprosy, but has added, in a condensed although clear and intelligible form, a summary of the opinions entertained regarding the nature of the disease by all the writers who have recently discussed the subject. The excellence of the coloured plates, and the careful analysis of the modern literature of leprosy, would have been alone sufficient to make the book a valuable addition to any medical library, even if its value had not been enhanced by analyses of cases and clinical histories drawn from the author's experience in the West Indies. Mr. Hillis has amassed a large amount of evidence derived from the records of contemporary writers, and from notes of 139 cases recorded by himself, which goes to show that the chief factor in the spread of leprosy is contact with the diseased. The only remedies which he has found useful in leprosy are chaulmoogra and gurjun oils. The gurjun oil is now alone used by him, and he believes that this drug may arrest the disease.

G. THIN, M.D.

Du Traitement des Fractures des Membres: Nouvelle Methode. Par V. RAOULT-DESLONGCHAMPS. Paris: J. B. Baillière et Fils. 1882.

DR. RAOULT-DESLONGCHAMPS advocates the treatment of fractures of the extremities by the following method. The injured limb having been banded and protected by wadding, splints made of laminated zinc are moulded to the parts laterally, and kept in

position by means of circlets fastening with buckles. In an ordinary fracture, as of the leg, these splints are at once applied, and the patient is allowed to sit up in an arm-chair, from which a rod arises posteriorly, and supports a swing in front, for the injured limb to rest upon. The advantages claimed for the method are, that it does away with the horizontal posture, that the splints are cheap, light, and comfortable, and can readily be applied in time of war, or in an emergency.

The author does not clearly make out that the plan he strongly advocates is any improvement over a case composed of paste-board splints and common starch. Voluminous details are given of fractures of the pelvis and bones of the lower extremity, of the clavicle and bones of the upper extremity, treated by Dr. Raoult-Deslongchamps, in accordance with this plan, which seems to have led to satisfactory results. The author also suggests that a splint made of one piece of laminated zinc would prove of service in cases where the nasal bones have been broken.

T. F. CHAVASSE, M.D.

Die Tuberculose vom Standpunkt der Infektionslehre. Von J. COHNHEIM. Leipzig. 1881.

DR. COHNHEIM is a firm believer in the communicability of tubercle; that it is an infectious as well as an infective disease; and he is convinced that in the great majority of cases the reception *ab extra* of the 'germs' could be established. He urges that the greater frequency with which the lungs are attacked points to a poison gaining access by the respiratory passages, as would tubercle-cells from dried sputa, etc.; while the fact that in young infants the bowels are almost always the first organs affected is easily explained if we suppose milk to be the vehicle in these cases. The identity of *perlsucht* with human tuberculosis has not, indeed, been as yet universally accepted, still less has it been proved to be a cause; but when we consider the ease, nay, almost certainty, with which infants, nursed by tuberculous mothers, become themselves tuberculous, though in different organs, the presumption is well nigh irresistible. It is true that another class of cases, in which there is a primary deposit of tubercle in the bones, joints, or brain, are not so easily interpreted.

Acute miliary tuberculosis differs, in our author's opinion, from the slower process supervening in chronic pneumonia only in the rapidity with which the infective process extends itself, depending probably on special circumstances which further investigation may reveal.

The popular ideas of predisposition and heredity, Dr. Cohnheim accepts only with considerable qualification. That different persons exhibit different degrees of susceptibility, or of resistance to other infectious diseases, is well known; and that apparently healthy members of a family in which cases have appeared should successively succumb, is not to be wondered at when we assume infection. There is much also that may be urged against the doctrine of heredity, while all that can be adduced in its favour is equally explicable by susceptibility or feeble resisting power, and direct infection by the mother's milk, or, later, by the respiration of an infected atmosphere; and it is worthy of note that, however far gone in consumption the parents may be, the infant never exhibits tubercle at the time of birth as it does in the case of syphilis. The practical lessons to be drawn from this view of tuberculosis are obvious.

E. F. WILLOUGHBY, M.B.

Die Lehre vom Harn: Ein Handbuch für Studierende und Aerzte. Bearbeitet von Dr. E. SALKOWSKI und Dr. WILH. LEUBE. Berlin: Hirschwald. 1882.

On the Urine: A Handbook for Students and Medical Practitioners. By Dr. E. SALKOWSKI and Dr. WILH. LEUBE. Berlin: August. Hirschwald, 1882.

THIS manual is the most complete and recent work on the urine with which we are acquainted. It is written by two of the most eminent German authorities on the subject, each of whom has added much to the stores of knowledge accumulated in this department during the last quarter of a century. As a work of reference, especially in the details of chemical manipulation, in which our own text-books are far too meagre, this book deserves a place on the shelves of every physician. It does for the science of urinalogy what Wagner's manual has done for general pathology.

The chapter on albuminuria is an excellent one, though it was written before the appearance of Senator's monograph. The illustrations are not numerous, but are very good, and sufficient for most purposes. The authors necessarily treat of much that is still matter for controversy, and express their own views with clearness and vigour.

A very good *résumé* is given of the literature which has accumulated respecting acetonuria, and the substance giving the ferric chloride reaction. The latest chemical details are also to be found on the subjects of hæmoglobin, and indoxyl in the urine. In its clinical aspect, the book is not so good; it is everywhere evident that the conclusions of the laboratory are regarded as authoritative, however they may clash with clinical observations.

In this country, at least, the belief still remains, strongly established, that medicine is founded on observations made at the bedside and in the dead-house; and, while we admit the value of experimental studies in elucidating many obscure points, we are cautious in accepting them as the basis for practical rules, or anatomical facts. Though the German school is not without its imitators in this country, we do not think there is any strong indication that this wise principle is in any danger of being abandoned.

ROBERT SAUNDBY, M.D.

Syphilis. By V. CORNIL. Translated, with notes and additions by J. H. C. SIMES, M.D., and J. W. WHITE, M.D. of Philadelphia. Pp. 461. London: H. Kimpton. 1882.

THE lectures on syphilis, of which the present volume contains a translation, were delivered by M. Cornil at the Lourcine Hospital in 1878, and published in Paris in 1879. They do not deal with the subject of syphilis as a whole, but rather with its pathological anatomy, especially the minute anatomy of the various changes produced by the disease in all its stages, from the initial lesion to the gummy growth or syphiloma, as it affects the skin, the mucous membrane, the bones, and the various internal organs. Most of the specimens on which the author's observations were made were removed during life; and the microscopic appearances are well shown in the original by means of lithographic plates, in the translation by woodcuts. M. Cornil thus deals chiefly with those points on which most books on syphilis are deficient, and the value of his work is by this time sufficiently well-known and appreciated to render a further description of it unnecessary.

Besides translating the work into English, Drs. Simes and White have also made additions to the text—chiefly as regards clinical matters—which occupy about one-third of the present volume.

ARTHUR COOPER.

Lock Hospitals and Lock Wards in General Hospitals. By F. W. LOWNDES, M.R.C.S., Surgeon to the Liverpool Lock Hospital. 1882.

IN this pamphlet, Mr. Lowndes gives much valuable information respecting the various lock hospitals and lock wards in general hospitals in the United Kingdom, and shows how inadequate is the accommodation at present available for contagious diseases in proportion to the civil population. There are two great causes, says the author, of the languishing condition of our voluntary lock hospitals. One is a feeling of indifference on the part of the general public; the other is a fear that by supporting them an implied sanction is given to immorality. Mr. Lowndes' observations and statistics ought to have some effect in removing both these causes.

NEW INVENTIONS.

NEW HYDROCELE SYRINGE.

MESSRS. WRIGHT AND CO. have recently carried out the instructions of Mr. Richard Davy, Surgeon to the Westminster Hospital, for simplifying the ordinary hydrocele syringe for iodine. The old syringe consists of eight or nine different pieces, which are liable to get out of order; and the nozzle fits only one cannula. The new syringe consists of three pieces only; the nozzle is made tapering, and is of glass, so as to fit any ordinarily sized cannula. The engraving



shows well the piston, the glass cylinder, and the metal cap. The new syringe can be cleaned with far greater ease than one of the old pattern. The price is also much less.

FORCEPS FOR REMOVING STARCHED OR GUM AND CHALK BANDAGES.

MR. DAVY has found that, in orthopædic practice, his dressers have constantly to remove bandages which have been temporarily stiffened with starch, or gum and chalk, or plaster. He has been dissatisfied with all scissors made for this purpose; and now he uses

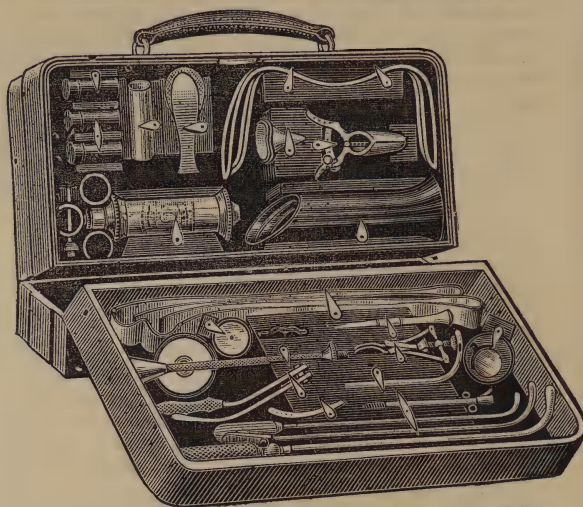


the forceps shown here and a small saw: they are the most practically useful tools for the purpose. The forceps acts either as a cutting or a holding agent, and cannot get out of order by fair usage. To cut with this forceps, the bandage must be firmly grasped by the blades, and then a rotatory movement given to the wrist; the edge of the blades (right or left) crushes open the bandage.

DIAGNOSIS-CASE.

MR. WILLIAM THOMAS writes in the *British Medical Journal* that, having, for some time, wished to have various mechanical aids to diagnosis in a portable form, he instructed Messrs. Salt and Son, surgical-instrument makers of Birmingham, to make a diagnosis-case, which they have done most ably and satisfactorily, and have produced an useful light case, containing nearly everything required for diagnostic purposes. The following is a list of the instruments, etc., included: Sims's uterine speculum, Fergusson's metal specula, bivalve rectum-speculum, metal ear-specula, nasal-speculum, Laycock's spatula, ear-syringe, urinometer, and trial-glass; three vulcanite boxes, containing cupric test, nitric acid, caustic potash, hermetically sealed; cystometer, spring measuring-tape, stethoscope, ophthalmoscope, exploring trocar, Simpson's sound, male and female catheter combined, exploring sound, Thompson's sound and searcher, and clinical thermometer. The case consists of two halves, and, when closed, forms a kind of portable reticule-case, as shown in the engraving;

a reserve space is also made, as a receptacle for the storage of any addition the fancy of the individual practitioner may think desirable. The various instruments are securely fixed, each in position, and



the engraving gives a fair illustration of the case. Mr. Thomas considers the case worthy of the reputation of the firm by whom it has been manufactured, and believes that his professional brethren will be glad to know of such an useful adjunct to practice.

A NEW PORTABLE STETHOSCOPE.

THE stethoscope, of which we give an engraving is the most portable which has come under our notice. Its extreme length, when fully extended, is that of an ordinary stethoscope, viz., seven inches, whilst it admits of being closed respectively to five inches and a half, and three inches and three quarters; this is effected by two telescopic slides which lock at the limit of extension by a simple bayonet-catch at each point of junction, by a single and slight movement to the right, whether one or both tubes be employed. The ear-piece is removable, and the instrument can be conveniently carried in the waistcoat pocket. The tubes are made of aluminium, and the mounts of celluloid in various colours, as amber, tortoiseshell, and coral.

This stethoscope is made by Messrs. Salt and Son of Birmingham. In it the conduction of sound is excellent: the price is exceedingly moderate, and the appearance is very carefully brought up to an artistic standard.



DR. GALEZOWSKI'S OPHTHALMOSCOPE.

Dr. GALEZOWSKI has invented an ophthalmoscope with double focus, of which we append an illustration. The mirror B has a focus of 23 centimètres. In examining the inverted image, it is placed flat, and against the plate which covers the glasses. The mirror C has a focus of 8 centimètres, and is to be used for the erect image; in this case it is inclined either to right or to left by moving the two pivots at the ends of the supports, D, E. The inclination can be

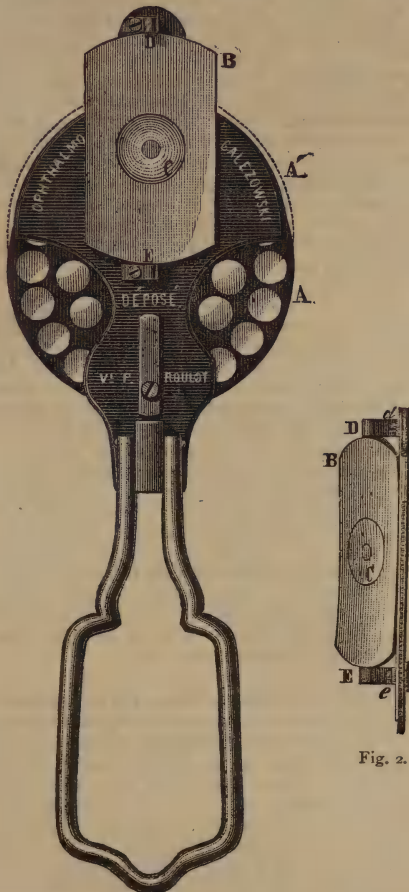


Fig. 1.



Fig. 2.

changed, which is a great advantage. The wheel carries two rows of glasses, of which the one at the periphery is the concave series; the other, at the centre, is the convex series. The observer brings forward one or the other of these series by turning the wheel, which occupies one of the two positions, A or A'. The jointed handle folds over the instrument, and forms a guard for the two mirrors. The illumination of the fundus of the eye with the inverted image requires a focus at least 25 centimètres in length; but, for the examination of the erect image, this mirror is not so convenient, for the rays of light are dispersed over the fundus oculi, and are consequently concentrated to a focus too far behind the retina. Mirrors with very short foci, such as those of Coccius, Parent, etc., give, on the contrary, a very bright light, which is concentrated on the retina itself. To combine the two conditions of illumina-

tion in the same mirror was the object which Dr. Galezowski proposed to attain by the construction of a new ophthalmoscope. He found by experiment that a very large opening might be made in the centre of the mirror, without sensibly disturbing the illumination in the case of the reversed image. In the same way, by placing in the centre of the ophthalmoscopic mirror with long focus, another small mirror with a short focus of 6 centimètres, the clearness of the inverted image is by no means compromised, and the erect image is much more distinctly illuminated than by the other mirrors. M. Galezowski's ophthalmoscope is useful for the definition of the different degrees of hypermetropia

PEROT
Fig. 3.

and myopia, and there is only one wheel, which contains the convex and concave glasses. The two systems of glasses are placed in two concentric circles, the concave glasses are situated at the periphery of the wheel, being numbered 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20; the convex glasses, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, are situated in the same wheel towards the centre. This wheel, by a simple sliding movement, shows in front of the opening of the mirror both series of glasses at the will of the observer. In examining the erect image, it is very advantageous to give the mirror an inclined position; this advantage has been obtained in this ophthalmoscope by a very simple mechanism, which allows it to be inclined a little more or less up to 35 degrees. This instrument, which is manufactured by M. Roulot, surgical instrument-maker of Paris, is very easy to manipulate, and the glasses may be cleaned without removal.

MISCELLANY.

THE BRITISH ASSOCIATION.—The Council of the British Association have nominated Mr. A. G. Vernon Harcourt, M.A., F.R.S., to the office of General Secretary of the Association, in the room of the late Professor F. M. Balfour.

ON the announcement in Russia that the course of medical instruction for women would be closed, a great meeting was held to protest against the measure, and a Moscow merchant offered to spend 200,000 roubles if the St. Petersburg authorities would undertake the management of the lectures.

WOMEN DOCTORS IN SPAIN.—*Ea Tribuna*, of Madrid, has a long account of the granting by the medical faculty of that city of a Degree of Medicine on Senorita Martina Casells Bellaspi. She is the first Spanish woman who has studied medicine and taken her degree. The paper speaks in warm terms of her as a lady who, in spite of much opposition and national prejudice, has won high

honours. Another Spanish lady is following in Senorita Casells' footsteps. Finding that the Valencian School of Medicine had closed its doors against her, she is now studying in Madrid, where she has met with a more friendly reception.

COLONIAL AND EXPORT TRADE EXHIBITION.—An exhibition bearing this title will be held at Amsterdam from May to October 1883, which will include the following classes devoted to medical and surgical curative appliances. Export exhibition: Group V.—Spectacles, eye-glasses, and other optical instruments. Group VI.—Medicines, mineral waters, chemicals, and drugs. Group VII.—Requisites and appliances for physics and chemistry for spectral analysis, polarisation, saccharometry, etc., for meteorology and electricity, and for seismography, surgical instruments and hospital necessities, instruments for dentists, apparatuses for gymnastics, orthopaedics, etc. All communications should be addressed to Dr. Thos. Stuart, Amsterdam, secretary to the export trade section of the Amsterdam Colonial and Export Trade Exhibition.

DETERMINATION OF IODINE IN THE URINE OF PERSONS UNDERGOING TREATMENT BY IODOFORM.—The extensive use of iodoform for surgical purposes at the present day, renders it desirable to have a suitable means of determining the amount of iodine excreted in the urine of patients undergoing the iodoform treatment. C. Bernbeck has obtained good results in the following way. Two hundred cubic centimètres of urine are made slightly alkaline with a solution of caustic potash; the whole is then evaporated to dryness, and the residue heated to redness to destroy all organic substances. The ash thus obtained is extracted with boiling alcohol, the extract filtered off and evaporated over a water bath. The residue is mixed with a few cubic centimètres of distilled water, a few drops of sulphuric acid, previously saturated with nitrous acid vapours are added, and the whole is then shaken up with a small quantity of carbon bisulphide. The presence of iodine gives rise to the formation of the well-known violet tinge in the carbon bisulphide; and, when it is present in anything more than mere traces, its amount may be determined by titration with a solution of palladium chloride of known strength.—*Pharm. Zeit.*, 1882, April 12th.

THE INDUCTION-PROBE AND PRESIDENT GARFIELD.—At the recent meeting of the American Association for the Advancement of Science, Professor Graham Bell delivered an address on the electrical experiments to determine the location of the bullet in the body of the late President Garfield, and described a completely successful form of induction-balance for the detection of metallic masses in the human body, described in the *LONDON MEDICAL RECORD* for Aug. 15, 1881. The lecturer recalled the experiments of last year on the wounded President; the results obtained were that the telephone gave a peculiar spluttering sound which, on the induction balance being passed over the person of the patient, suddenly increased in loudness when it rested on a particular spot. The apparatus was sensitive to the presence of a leaden bullet five inches from it. An area of sound was thus marked out, and the experimenters concluded that the bullet was within it, but subsequent examination proved this to be incorrect. In fact, the area of sound was produced by a steel spring mattress under the President's bed, which had been overlooked by the attendant physicians. The apparatus has been subsequently improved by imbedding the two movable coils in paraffin, and adjusting them to silence by a micrometer screw. With this instrument, a successful experiment was performed on the person of Colonel Clayton, who had for several years suffered from the presence of an Enfield bullet; and now the exact position of a bullet could, according to Professor Bell, be accurately told in any part of the human body.

THE POISONOUS PROPERTIES OF MUSHROOMS.—The deaths which are frequently reported from the consumption of supposed edible fungi render their question of their toxic qualities an important one. Professor Ponfick of Breslau

has lately made experiments on the common mushroom, and the practical results obtained are interesting and valuable. It appears that all common mushrooms are poisonous—a fact not sufficiently understood—but cooking deprives them in a greater or less degree of their poisonous qualities. The repeated washing with cold water which they usually undergo to clean them takes away a portion of the poison, and boiling does the rest; but the water in which they have been boiled is highly poisonous, and should always be carefully disposed of. Experiments which Professor Ponfick made on dogs showed that if a dog ate one per cent. of its own weight of raw mushrooms it fell sick, but recovered; if it ate one and a half per cent. the poison had a more violent but not fatal effect, and if it ate two per cent. it was inevitably fatal. The water in which mushrooms had been boiled was far more poisonous than the raw mushrooms; while the mushrooms thus boiled could be taken without hurt to the amount of ten per cent. of the weight of the dog's body. Washing with cold water does not remove all the poison, so that mushrooms thus prepared were poisonous when taken in large quantities. Dried mushrooms are still dangerous for from twelve to twenty days, and also the water in which they have been boiled. They require to be dried for at least a whole month, and are really only safe after four months' drying. These are important facts to be borne in mind.

THE LECLANCHÉ PILE.—The death is announced, at the early age of 43 years, of a Frenchman whose name is known wherever electricity is used—George Leclanché. He was the inventor of the well-known Leclanché pile, whose use is probably more widespread than that of any other form of electrical generator. He quitted the service of the Eastern Railway Company about 1867 to devote himself to his researches on the peroxide of manganese piles. His first patent for the porous vase elements is dated 1867; in 1875 new patents were taken for his cylindrical agglomerated plates; in 1876-8 he perfected his new elements of movable agglomerated plates, at present those most generally in use. If the number of Leclanché's inventions has been small, their success has been as complete as could be wished. The inventor realised a large fortune, and the manufacture of the Leclanché cell is in itself an important Paris industry. On an average, 2,000 agglomerated plates are manufactured daily.

MICROSCOPISTS AT DINNER.—When the microscopists sat down to dinner, each one produced his compound oscillating microscope, and carefully examined every article of food. Excited shouts went up as new discoveries of metallic, vegetable, and sausage substances were discovered in the soup. An examination made of the water resulted in the discovery of such an enormous quantity of infusoria, mammalia, and pachydermata, that the microscopists unanimously refused to drink it. During the progress of the meal, much enthusiasm was aroused by the announcement of Professor White that he had discovered a trace of hair-pin in the beef-steak, thus upsetting the theory that the beef-steak of American hotels is a chemically pure carburet of sole-leather; and, at a later hour, Professor Black's assertion—based on a thorough microscopic examination—that he had discovered whortleberries in the whortleberry pudding, and wine in the wine sauce, led to a heated discussion, in the course of which thirty-eight microscopists declared that Professor Black was an ignorant and unprincipled pretender; and eleven others maintained that the Professor was acting in good faith, and that his discoveries could be accounted for on the theory that the waiter had given him, by mistake, a piece of whortleberry pudding made expressly for the landlord's private table.—*New York Times*.



